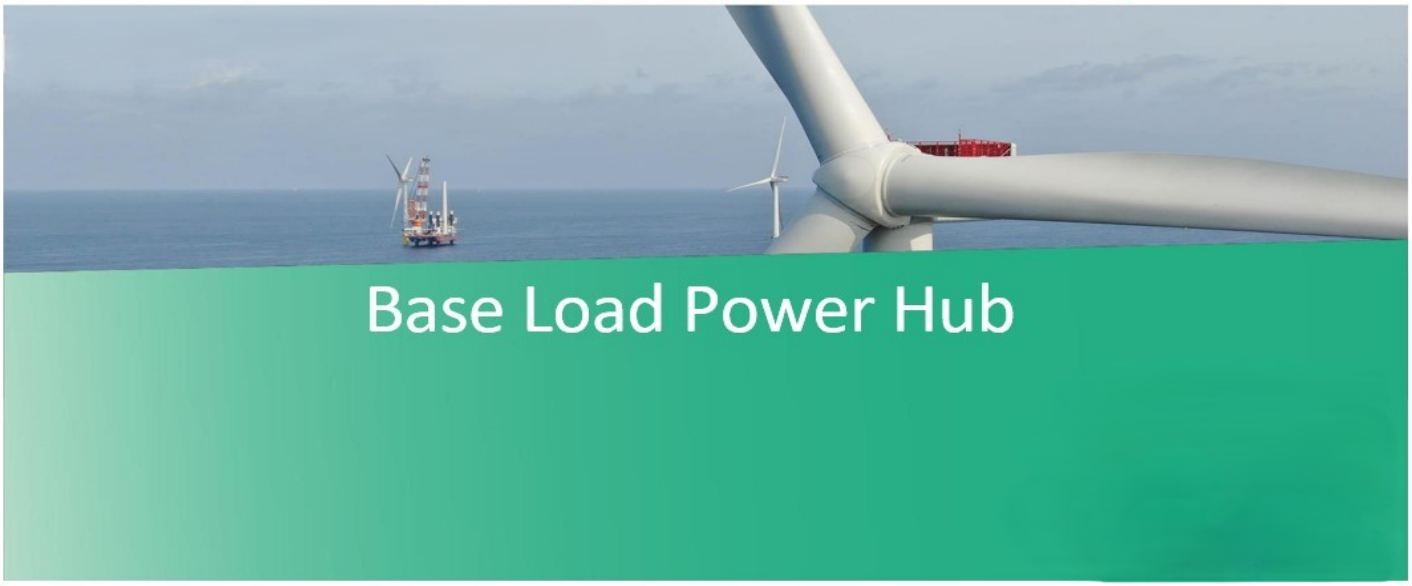
CROSSWIND

ROSETTI MARINO

PROVERLIS

PROJECT **123A90 - HOLLANDSE KUST NOORD WIND PARK**
BLPH Project



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	83 Main Power Distribution Low Voltage 440 V
SUBSYSTEM	83-35 Emergency Lighting Upper Deck

CROSSWIND	123A90 - HOLLANDSE KUST NOORD WIND PARK BLPH Project MECHANICAL COMPLETION DOSSIER INDEX	ROSETTI MARINO

Sub System N°:	83-35	Tick as appropriate	ONSHORE	O
Description:	Emergency Lighting Upper Deck		OFFSHORE	NA

1.	***READY FOR COMMISSIONING CERTIFICATE*** *Ready For Commissioning Certificate (RFC)*	O
2.	***CONSOLIDATED PUNCH LISTS*** *Cleared and Residual Items*	O
3.	***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS*** *Mark-up drawings showing the limits of the relevant System/Sub-System*	O
4.	***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE*** *Building Sub-System Status Index (Print out) and Check/Test sheets*	NA
5.	***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE*** *Electrical Sub-System Status Index (Print out) and Check/Test Sheets* *Hazardous Area Equipment Detailed Inspection*	O
6.	***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE*** *Instrumental Sub-System Status Index (Print out) and Check/Test Sheets*	NA
7.	***MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE*** *Mechanical SubSystem Status Index (Print out) and Check/Test Sheets*	NA
8.	***MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE*** *Telecommunication Sub-System Status Index (Print out) and Check/Test Sheets*	NA
9.	***MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE*** *HVAC Sub-System Status Index (Print out) and Check/Test Sheets*	NA
10.	***MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE*** *Piping Sub-System Status Index and Check/Test Sheets*	NA
11.	***MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE*** *Safety Sub-System Status Index (Print out) and Check/Test Sheets*	NA
12.	***FAT / VENDOR REPORTS*** *Fat reports issued by vendors and/or vendor reports*	NA
13.	***MECHANICAL COMPLETION CHANGES / MARK-UPS*** *A copy of the changes initiated during the Mechanical Completion process pertaining to the relevant Sub-System will be incorporated in this section*	NA

Note: Under the generic terminology “Building” are also covered the following disciplines: **Structural, Painting**

Under the generic terminology “Instrumental” is also covered the following discipline: **Fire & Gas**

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	1		Issued on:	2025-01-25	
System:	83	/	Main Power Distribution Low Voltage 440 V		
SubSystem:	83-35	/	Emergency Lighting Upper Deck		

1	COMPANY has, at its option and if required, reviewed the mechanical completion associated with the above-named system/sub-system of the SCOPE and observed that such functional sub-system has been brought into readiness for commencement of the associated pre-commissioning and commissioning activities, but for the outstanding punch list items, if any, attached and referred in this Certificate.
2	Issuance of this Certificate shall not release CONTRACTOR from any of his obligations, responsibilities or liabilities under the CONTRACT.
3	Mechanical Completion Status Index attached (per Discipline) Punch List report attached (Outstanding and Cleared)

PUNCH LIST	PENDING POINTS	
Note: All Category "A" Items must be cleared prior to issue a Ready For Commissioning (RFC) Certificate	A	B
	'0	104

REMARKS:

	CONTRACTOR Construction Manager	**CONTRACTOR** Commissioning Manager	**COMPANY** Construction Lead (if required)	**COMPANY** Commissioning Lead (if required)
Name	Wolmer Borghi	Anthony Iveson	CPY NOT PRESENT	CPY NOT PRESENT
Date	2025-01-27	2025-01-27	2025-01-27	2025-01-27
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-01-27T14:57:09.769Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-01-27T15:07:30.156Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-27T15:19:19.247Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-27T15:19:48.059Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 83-35 & process: MC

Electrical	83-35 Emergency Lighting Upper Deck

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
EJB-200N1-08-L1-17	JB - EMERGENCY LIGHTING	ONSHORE	C10001648	CPX31	100	2025-01-16	RFC 1
EJB-200N1-08-L1-18	JB - EMERGENCY LIGHTING	ONSHORE	C10001649	CPX31	100	2025-01-21	RFC 1
EJB-200N1-08-L1-19	JB - EMERGENCY LIGHTING	ONSHORE	C10001650	CPX31	100	2025-01-24	RFC 1
EJB-200N1-08-L1-20	JB - EMERGENCY LIGHTING	ONSHORE	C10001651	CPX31	100	2025-01-16	RFC 1
ELF-200N1-08-L1-19	EMERGENCY LIGHT	ONSHORE	C10001693	CPX00	100	2025-01-02	RFC 1
ELF-200N1-08-L1-20	EMERGENCY LIGHT	ONSHORE	C10001694	CPX00	100	2024-12-31	RFC 1
ELF-200N1-08-L1-21	EMERGENCY LIGHT	ONSHORE	C10001695	CPX00	100	2024-12-31	RFC 1
ELF-200N1-08-L1-22	EMERGENCY LIGHT	ONSHORE	C10001696	CPX00	100	2024-12-31	RFC 1
ELF-200N1-08-L1-23	EMERGENCY LIGHT	ONSHORE	C10001358	CPX00	100	2025-01-23	RFC 1
ELF-200N1-08-L1-24	Emergency Lighting Fixture	ONSHORE	C10004712	CPX00	100	2025-01-17	RFC 1
ELF-200N1-08-L1-25	Emergency Lighting Fixture	ONSHORE	C10004713	CPX00	100	2025-01-17	RFC 1
P-EJB-200N1-08-L1-01	Lighting & Small Power DB BoP / Emergency Lighting Upper Deck - Circuit No. 1	ONSHORE	C10000610	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-03	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000718	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-04	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000707	CPX09	100	2024-12-11	RFC 1
P-EJB-200N1-08-L1-05	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000712	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-06	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000714	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-07	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000716	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-08	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000721	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-09	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000723	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-10	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000725	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-11	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000727	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-12	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000729	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-14	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000733	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-15	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000735	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-16	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000737	CPX09	100	2025-01-17	RFC 1
P-EJB-200N1-08-L1-17	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000739	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-18	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000741	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-19	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000743	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-20	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000745	CPX09	100	2025-01-15	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 83-35 & process: MC

Electrical	83-35 Emergency Lighting Upper Deck						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
P-ELF-200N1-08-L1-01	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000705	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-02	Emergency Lighting Fixture / Emergency Lighting Fixture	ONSHORE	C10000706	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-03	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000710	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-04	Emergency Lighting Fixture / Emergency Lighting Fixture	ONSHORE	C10000711	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-05	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000713	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-06	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000715	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-07	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000717	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-08	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000719	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-09	Emergency Lighting Fixture / Emergency Lighting Fixture	ONSHORE	C10000720	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-10	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000722	CPX09	100	2025-01-18	RFC 1
P-ELF-200N1-08-L1-11	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000724	CPX09	100	2025-01-18	RFC 1
P-ELF-200N1-08-L1-12	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000726	CPX09	100	2025-01-22	RFC 1
P-ELF-200N1-08-L1-13	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000728	CPX09	100	2025-01-02	RFC 1
P-ELF-200N1-08-L1-14	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000730	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-15	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000732	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-16	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000734	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-17	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000736	CPX09	100	2025-01-18	RFC 1
P-ELF-200N1-08-L1-18	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000738	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-19	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000740	CPX09	100	2025-01-02	RFC 1
P-ELF-200N1-08-L1-20	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000742	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-21	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000744	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-22	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000746	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-23	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000708	CPX09	100	2025-01-23	RFC 1
P-ELF-200N1-08-L1-24	Emergency Lighting JB/Emergency Lighting Fixture	ONSHORE	C10004716	CPX09	100	2025-01-17	RFC 1
P-ELF-200N1-08-L1-25	Emergency Lighting JB/Emergency Lighting Fixture	ONSHORE	C10004717	CPX09	100	2025-01-17	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 83-35 & process: MC

ATEX	83-35 Emergency Lighting Upper Deck						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
EJB-200N1-08-L1-01	JB Emergency Lighting Upper Deck - Circuit No. 1	ONSHORE	C10001657	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-03	JB - EMERGENCY LIGHTING	ONSHORE	C10001659	CJX01	100	2025-01-18	RFC 1
EJB-200N1-08-L1-04	JB - EMERGENCY LIGHTING	ONSHORE	C10001297	CJX01	100	2025-01-23	RFC 1
EJB-200N1-08-L1-05	JB - EMERGENCY LIGHTING	ONSHORE	C10001638	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-06	JB - EMERGENCY LIGHTING	ONSHORE	C10001639	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-07	JB - EMERGENCY LIGHTING	ONSHORE	C10001641	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-08	JB - EMERGENCY LIGHTING	ONSHORE	C10001640	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-09	JB - EMERGENCY LIGHTING	ONSHORE	C10001642	CJX01	100	2025-01-18	RFC 1
EJB-200N1-08-L1-10	JB - EMERGENCY LIGHTING	ONSHORE	C10001643	CJX01	100	2025-01-23	RFC 1
EJB-200N1-08-L1-11	JB - EMERGENCY LIGHTING	ONSHORE	C10001644	CJX01	100	2025-01-16	RFC 1
EJB-200N1-08-L1-12	JB - EMERGENCY LIGHTING	ONSHORE	C10001645	CJX01	100	2025-01-23	RFC 1
EJB-200N1-08-L1-14	JB - EMERGENCY LIGHTING	ONSHORE	C10001271	CJX01	100	2025-01-16	RFC 1
EJB-200N1-08-L1-15	JB - EMERGENCY LIGHTING	ONSHORE	C10001646	CJX01	100	2025-01-16	RFC 1
EJB-200N1-08-L1-16	JB - EMERGENCY LIGHTING	ONSHORE	C10001647	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-01	EMERGENCY LIGHT	ONSHORE	C10001677	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-02	EMERGENCY LIGHT	ONSHORE	C10001678	CJX01	100	2025-01-14	RFC 1
ELF-200N1-08-L1-03	EMERGENCY LIGHT	ONSHORE	C10001679	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-04	EMERGENCY LIGHT	ONSHORE	C10001680	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-05	EMERGENCY LIGHT	ONSHORE	C10001681	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-06	EMERGENCY LIGHT	ONSHORE	C10001682	CJX01	100	2025-01-15	RFC 1
ELF-200N1-08-L1-07	EMERGENCY LIGHT	ONSHORE	C10001683	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-08	EMERGENCY LIGHT	ONSHORE	C10001684	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-09	EMERGENCY LIGHT	ONSHORE	C10001685	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-10	EMERGENCY LIGHT	ONSHORE	C10001686	CJX01	100	2025-01-18	RFC 1
ELF-200N1-08-L1-11	EMERGENCY LIGHT	ONSHORE	C10001687	CJX01	100	2025-01-18	RFC 1
ELF-200N1-08-L1-12	EMERGENCY LIGHT	ONSHORE	C10001688	CJX01	100	2025-01-22	RFC 1
ELF-200N1-08-L1-13	EMERGENCY LIGHT	ONSHORE	C10001689	CJX01	100	2025-01-02	RFC 1
ELF-200N1-08-L1-14	EMERGENCY LIGHT	ONSHORE	C10001690	CJX01	100	2024-12-31	RFC 1
ELF-200N1-08-L1-15	EMERGENCY LIGHT	ONSHORE	C10001392	CJX01	100	2025-01-16	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 83-35 & process: MC

ATEX	83-35 Emergency Lighting Upper Deck						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
ELF-200N1-08-L1-16	EMERGENCY LIGHT	ONSHORE	C10001393	CJX01	100	2024-12-31	RFC 1
ELF-200N1-08-L1-17	EMERGENCY LIGHT	ONSHORE	C10001691	CJX01	100	2025-01-22	RFC 1
ELF-200N1-08-L1-18	EMERGENCY LIGHT	ONSHORE	C10001692	CJX01	100	2024-12-31	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	83	Main Power Distribution Low Voltage 440 V
SUBSYSTEM	83-35	Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002232	A	P-ELF-200N1-08-L1-22 C10000746	Not enought threads are thightened between the lock nut and the cable gland body.	.		AAndreani 2024-12-31	2025-01-16	Ecarotenuto 2025-01-16	2025-01-16
C30002233	A	P-ELF-200N1-08-L1-22 C10000746	outer sheath of cable is damaged on cable gland on JB side, cable gland to be redone, see attached foto	.		AAndreani 2024-12-31	2025-01-16	Gtangianu 2025-01-16	2025-01-16
C30002237	A	P-ELF-200N1-08-L1-21 C10000744	armour inside cable gland light side is oxidized	.		AAndreani 2024-12-31	2025-01-22	Pschintu 2025-01-22	2025-01-22
C30002238	A	P-ELF-200N1-08-L1-21 C10000744	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-23	Pschintu 2025-01-23	2025-01-23
C30002248	A	P-ELF-200N1-08-L1-20 C10000742	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002249	A	P-ELF-200N1-08-L1-20 C10000742	armour inside cable gland light side is oxidized and cable inside cable gland is found wet	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002250	A	P-ELF-200N1-08-L1-18 C10000738	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-16	Ecarotenuto 2025-01-16	2025-01-16
C30002263	A	P-ELF-200N1-08-L1-14 C10000730	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-13	Gtangianu 2025-01-13	2025-01-13
C30002271	A	P-ELF-200N1-08-L1-16 C10000734	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-13	Gtangianu 2025-01-13	2025-01-13

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	83	Main Power Distribution Low Voltage 440 V
SUBSYSTEM	83-35	Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002290	A	P-ELF-200N1-08-L1-19 C10000740	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2025-01-02	2025-01-13	Gtangianu 2025-01-13	2025-01-13
C30002297	A	P-ELF-200N1-08-L1-13 C10000728	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2025-01-02	2025-01-16	Ecarotenuto 2025-01-16	2025-01-16
C30002984	A	P-EJB-200N1-08-L1-07 C10000716	Not enought threads are thightened between the lock nut and the cable gland body. (EJB-200N1-08-L1-07 side)	.		Pschintu 2025-01-16	2025-01-21	AAndreani 2025-01-21	2025-01-21
C30003067	A	P-ELF-200N1-08-L1-17 C10000736	cable gland to be redone, core inside light are too short for correct connection	.		AAndreani 2025-01-18	2025-01-21	AAndreani 2025-01-21	2025-01-21
C30001660	B	P-EJB-200N1-08-L1-04 C10000707	Core tag is missing for cable on on both panel and JB side	.		AAndreani 2024-12-11			
C30001661	B	P-EJB-200N1-08-L1-04 C10000707	missing cable labelling on both JB and panel side	.		AAndreani 2024-12-11			
C30002231	B	P-ELF-200N1-08-L1-22 C10000746	wrong SS cable tag on JB side, missing SS cable tag on light side	.		AAndreani 2024-12-31	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002234	B	ELF-200N1-08-L1-22 C10001696	trafolite tag is wrong, report tag on another normal light	.		AAndreani 2024-12-31			
C30002235	B	ELF-200N1-08-L1-22 C10001696	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 83 Main Power Distribution Low Voltage 440 V
SUBSYSTEM 83-35 Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002236	B	ELF-200N1-08-L1-22 C10001696	The support is not well secured against vibration. Another support needs to be added	.		AAndreani 2024-12-31			
C30002239	B	P-ELF-200N1-08-L1-21 C10000744	missing SS cable tag on light side	.		AAndreani 2024-12-31			
C30002240	B	ELF-200N1-08-L1-21 C10001695	The support is not well secured against vibration. Another support needs to be added	.		AAndreani 2024-12-31			
C30002241	B	ELF-200N1-08-L1-21 C10001695	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002242	B	ELF-200N1-08-L1-21 C10001695	missing trafolite tag	.		AAndreani 2024-12-31			
C30002243	B	ELF-200N1-08-L1-20 C10001694	missing black plastic piece between coverand glass of the light	.		AAndreani 2024-12-31	2025-01-16	Lmussi 2025-01-16	2025-01-16
C30002244	B	ELF-200N1-08-L1-20 C10001694	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002245	B	ELF-200N1-08-L1-20 C10001694	The support is not well secured against vibration. Another support needs to be added	.		AAndreani 2024-12-31			
C30002246	B	ELF-200N1-08-L1-20 C10001694	missing trafolite tag	.		AAndreani 2024-12-31			

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Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002247	B	P-ELF-200N1-08-L1-20 C10000742	missing SS cable tag on light side	.		AAndreani 2024-12-31			
C30002251	B	P-ELF-200N1-08-L1-18 C10000738	wrong SS cable tag on JB side, missing SS cable tag on light side	.		AAndreani 2024-12-31			
C30002262	B	P-ELF-200N1-08-L1-14 C10000730	missing SS cable tag on ight side	.		AAndreani 2024-12-31			
C30002272	B	P-ELF-200N1-08-L1-16 C10000734	wrong SS cable tag on JB side, missing SS cable tag on light side	.		AAndreani 2024-12-31			
C30002291	B	P-ELF-200N1-08-L1-19 C10000740	missing SS cable tag on light side	.		AAndreani 2025-01-02			
C30002293	B	ELF-200N1-08-L1-19 C10001693	The support is not well secured against vibration. Another support needs to be added	.		AAndreani 2025-01-02			
C30002294	B	ELF-200N1-08-L1-19 C10001693	missing all lock nuts for stopped the lamp	.		AAndreani 2025-01-02	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002295	B	ELF-200N1-08-L1-19 C10001693	Trafolite tag is missing	.		AAndreani 2025-01-02			
C30002296	B	P-ELF-200N1-08-L1-13 C10000728	missing SS cable tag on light side	.		AAndreani 2025-01-02			

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Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002786	B	P-ELF-200N1-08-L1-02 C10000706	Missing cable tag SS , near ELF-200N1-08-L1-01 / ELF-200N1-08-L1-02	.		APolo 2025-01-14	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002789	B	P-ELF-200N1-08-L1-03 C10000710	Missing cable tag SS , near ELF-200N1-08-L1-03 / EJBF-200N1-08-L1-07	.		APolo 2025-01-14	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002790	B	P-ELF-200N1-08-L1-04 C10000711	Missing cable tag SS , near ELF-200N1-08-L1-04 / EJB-200N1-08-L1-05	.		APolo 2025-01-14	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002792	B	P-ELF-200N1-08-L1-05 C10000713	Missing cable tag SS , near ELF-200N1-08-L1-05 / EJB-200N1-08-L1-05	.		APolo 2025-01-14	2025-01-24	Lmussi 2025-01-24	2025-01-24
C30002794	B	P-ELF-200N1-08-L1-05 C10000713	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-14			
C30002801	B	P-ELF-200N1-08-L1-05 C10000713	The cable is not support .	.		APolo 2025-01-14			
C30002802	B	P-ELF-200N1-08-L1-07 C10000717	Missing cable tag SS , near ELF-200N1-08-L1-07 / EJB-200N1-08-L1-07	.		APolo 2025-01-14	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002804	B	P-ELF-200N1-08-L1-07 C10000717	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-14			
C30002805	B	P-ELF-200N1-08-L1-07 C10000717	The cable is not support .	.		APolo 2025-01-14			

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CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002856	B	P-ELF-200N1-08-L1-01 C10000705	Missing cable tag SS , near EJB-200N1-08-L1-01 / ELF-200N1-08-L1-01	.		APolo 2025-01-15			
C30002857	B	P-ELF-200N1-08-L1-06 C10000715	Missing cable tag SS , near EJB-200N1-08-L1-06 / ELF-200N1-08-L1-06	.		APolo 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002858	B	P-ELF-200N1-08-L1-08 C10000719	Missing cable tag SS , near EJB-200N1-08-L1-09 / ELF-200N1-08-L1-08	.		APolo 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002859	B	P-ELF-200N1-08-L1-08 C10000719	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-15			
C30002860	B	P-ELF-200N1-08-L1-09 C10000720	Missing cable tag SS , near EJB-200N1-08-L1-08 / ELF-200N1-08-L1-09	.		APolo 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002861	B	P-ELF-200N1-08-L1-09 C10000720	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-15			
C30002862	B	P-ELF-200N1-08-L1-15 C10000732	Missing cable tag SS , near ELF-200N1-08-L1-23 / ELF-200N1-08-L1-15	.		APolo 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002863	B	P-ELF-200N1-08-L1-06 C10000715	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-15			
C30002864	B	P-ELF-200N1-08-L1-06 C10000715	The cable is not support .	.		APolo 2025-01-15			

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CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002883	B	P-EJB-200N1-08-L1-14 C10000733	Missing SS cable tag both side	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002884	B	P-EJB-200N1-08-L1-10 C10000725	Missing SS cable tag both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002885	B	P-EJB-200N1-08-L1-11 C10000727	Missing SS cable tag both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002886	B	P-EJB-200N1-08-L1-12 C10000729	Missing SS cable tag both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002887	B	P-EJB-200N1-08-L1-09 C10000723	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002888	B	P-EJB-200N1-08-L1-20 C10000745	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002889	B	P-EJB-200N1-08-L1-19 C10000743	Missing SS cable tags both sides	.		Pschintu 2025-01-15			
C30002890	B	P-EJB-200N1-08-L1-18 C10000741	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002891	B	P-EJB-200N1-08-L1-17 C10000739	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24

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CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002892	B	P-EJB-200N1-08-L1-15 C10000735	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002958	B	EJB-200N1-08-L1-20 C10001651	Missing identification numbers on terminal strip (PW/PE) inside the (EJB-200N1-08-L1-20). See attached photo.	.		Gtangianu 2025-01-16			
C30002959	B	EJB-200N1-08-L1-20 C10001651	Not enought threads are thightened between the lock nut and the plugs. See attached photo.	.		Gtangianu 2025-01-16			
C30002960	B	EJB-200N1-08-L1-17 C10001648	Not enought threads are thightened between the lock nut and the plug. See attached photo.	.		Gtangianu 2025-01-16	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30002961	B	EJB-200N1-08-L1-17 C10001648	Missing identification numbers on terminal strip N/(PW/PE) inside the (EJB-200N1-08-L1-17). See attached photo.	.		Gtangianu 2025-01-16	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30002980	B	P-EJB-200N1-08-L1-01 C10000610	Missing SS cable tags both sides	.		Pschintu 2025-01-16			
C30002981	B	P-EJB-200N1-08-L1-05 C10000712	Missing SS cable tags both sides	.		Pschintu 2025-01-16	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002982	B	P-EJB-200N1-08-L1-06 C10000714	Missing SS cable tags both sides	.		Pschintu 2025-01-16	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002983	B	P-EJB-200N1-08-L1-07 C10000716	Missing SS cable tags both sides	.		Pschintu 2025-01-16			

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C30002985	B	P-EJB-200N1-08-L1-03 C10000718	Missing SS cable tag both sides	.		Pschintu 2025-01-16			
C30002986	B	P-EJB-200N1-08-L1-08 C10000721	Missing SS cable tag both sides	.		Pschintu 2025-01-16	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002994	B	P-ELF-200N1-08-L1-24 C10004716	Missing SS cable tag both sides	.		Pschintu 2025-01-17			
C30002995	B	P-ELF-200N1-08-L1-25 C10004717	Missing SS cable tag both sides	.		Pschintu 2025-01-17			
C30003047	B	ELF-200N1-08-L1-25 C10004713	Light and cable are installed in temporary position due to missing mechanical support	.		Pschintu 2025-01-17			
C30003048	B	ELF-200N1-08-L1-24 C10004712	Light and cable are installed in temporary position due to missing mechanical support	.		Pschintu 2025-01-17			
C30003049	B	ELF-200N1-08-L1-24 C10004712	Missing traffolyte tag	.		Pschintu 2025-01-17			
C30003050	B	ELF-200N1-08-L1-25 C10004713	Missing traffolyte tag	.		Pschintu 2025-01-17			
C30003051	B	P-EJB-200N1-08-L1-16 C10000737	Missing SS cable tag both end	.		Pschintu 2025-01-17			

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C30003056	B	EJB-200N1-08-L1-19 C10001650	Missing identification numbers on terminal strip (L/PW/PE) inside the (EJB-200N1-08-L1-19). See attached photo.	.		Gtangianu 2025-01-18			
C30003060	B	P-ELF-200N1-08-L1-10 C10000722	On both JB (EJB-200N1-08-L1-08) and light (ELF-200N1-08-L1-10) SS cable tag is missing	.		Lmussi 2025-01-18			
C30003061	B	P-ELF-200N1-08-L1-10 C10000722	On light side (ELF-200N1-08-L1-10) cable is entering the Light cable gland downwards while it should be upwards. On JB side bending radius of	.		Lmussi 2025-01-18			
C30003062	B	P-ELF-200N1-08-L1-11 C10000724	missing SS cable tag on both JB and light side	.		AAndreani 2025-01-18			
C30003068	B	P-ELF-200N1-08-L1-17 C10000736	missing SS cable tag on both JB and light side	.		AAndreani 2025-01-18			
C30003138	B	EJB-200N1-08-L1-18 C10001649	Antivibration washer is missing on the plug.	.		Lmussi 2025-01-21	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30003150	B	P-ELF-200N1-08-L1-12 C10000726	missing SS cable tag on JB side	.		AAndreani 2025-01-22			
C30003168	B	P-ELF-200N1-08-L1-23 C10000708	missing SS cable tag on both JB and light side	.		AAndreani 2025-01-23			
C30003169	B	ELF-200N1-08-L1-23 C10001358	missing trafolite tag	.		AAndreani 2025-01-23			

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CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003182	B	EJB-200N1-08-L 1-19 C10001650	The support is not well secured against vibration. Another support needs to be added	.		GBertuccelli 2025-01-24			

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C30002301	A	ELF-200N1-08-L1-13 C10001689	missing screw between enclosure and din rail, also missing the earthing continuity wire	.		AAndreani 2025-01-02	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002820	A	ELF-200N1-08-L1-02 C10001678	Missing the earth connection of the lamp and plate block/fixing	.		APolo 2025-01-14	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002866	A	ELF-200N1-08-L1-06 C10001682	Missing the earth connection of the lamp .	.		APolo 2025-01-15	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002909	A	ELF-200N1-08-L1-01 C10001677	Missing the earth connection .The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002922	A	ELF-200N1-08-L1-04 C10001680	Missing the earth connection. The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002942	A	ELF-200N1-08-L1-03 C10001679	Missing the earth connection. The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002946	A	ELF-200N1-08-L1-15 C10001392	Missing the earth connection . The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002949	A	ELF-200N1-08-L1-09 C10001685	The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-23	AAndreani 2025-01-23	2025-01-23
C30002950	A	ELF-200N1-08-L1-09 C10001685	Missing the earth connection inside the lamp between the cover and the lamp.	.		APolo 2025-01-16	2025-01-23	AAndreani 2025-01-23	2025-01-23

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C30002952	A	ELF-200N1-08-L1-08 C10001684	The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-23	AAndreani 2025-01-23	2025-01-23
C30002953	A	ELF-200N1-08-L1-15 C10001392	Missing the earth connection inside the lamp between the cover and the lamp.	.		APolo 2025-01-16	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002256	B	ELF-200N1-08-L1-18 C10001692	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2024-12-31			
C30002257	B	ELF-200N1-08-L1-18 C10001692	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002259	B	ELF-200N1-08-L1-18 C10001692	trafolite tag is missing	.		AAndreani 2024-12-31			
C30002266	B	ELF-200N1-08-L1-14 C10001690	trafolite tag is missing	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002268	B	ELF-200N1-08-L1-14 C10001690	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002269	B	ELF-200N1-08-L1-14 C10001690	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2024-12-31			
C30002273	B	ELF-200N1-08-L1-16 C10001393	missing plug on pole support of light	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20

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C30002274	B	ELF-200N1-08-L 1-16 C10001393	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2024-12-31			
C30002275	B	ELF-200N1-08-L 1-16 C10001393	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002276	B	ELF-200N1-08-L 1-16 C10001393	Trafolite tag is missing	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002298	B	ELF-200N1-08-L 1-13 C10001689	Trafolite tag is missing	.		AAndreani 2025-01-02	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002299	B	ELF-200N1-08-L 1-13 C10001689	missing all lock nuts for stopped the lamp	.		AAndreani 2025-01-02	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002300	B	ELF-200N1-08-L 1-13 C10001689	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2025-01-02			
C30002815	B	ELF-200N1-08-L 1-02 C10001678	Missing traffolyte tag side instrument	.		APolo 2025-01-14			
C30002816	B	ELF-200N1-08-L 1-02 C10001678	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-14			
C30002823	B	ELF-200N1-08-L 1-02 C10001678	Missing piece of black PVC between side caps and glass	.		APolo 2025-01-14	2025-01-17	Lmussi 2025-01-17	2025-01-17

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C30002867	B	ELF-200N1-08-L1-06 C10001682	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-15			
C30002874	B	ELF-200N1-08-L1-06 C10001682	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-15	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002876	B	ELF-200N1-08-L1-02 C10001678	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-15	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002878	B	EJB-200N1-08-L1-16 C10001647	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990069, but actual is 24P00297990018. See attached	.		Gtangianu 2025-01-15			
C30002900	B	EJB-200N1-08-L1-16 C10001647	Missing identification numbers on terminal strip (N/PE) inside the (EJB-200N1-08-L1-16). See attached photo.	.		Gtangianu 2025-01-16			
C30002902	B	EJB-200N1-08-L1-15 C10001646	Missing identification numbers on terminal strip (PE) inside the (EJB-200N1-08-L1-15). See attached photo.	.		Gtangianu 2025-01-16	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30002908	B	EJB-200N1-08-L1-15 C10001646	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990070, but actual is 24P00297990019. See attached	.		Gtangianu 2025-01-16			
C30002910	B	ELF-200N1-08-L1-01 C10001677	Missing traffolyte tag side instrument	.		APolo 2025-01-16			
C30002911	B	EJB-200N1-08-L1-14 C10001271	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990071, but actual is 24P00297990017. See attached	.		Gtangianu 2025-01-16			

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SYSTEM	83	Main Power Distribution Low Voltage 440 V
SUBSYSTEM	83-35	Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002912	B	ELF-200N1-08-L1-01 C10001677	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-16			
C30002913	B	EJB-200N1-08-L1-14 C10001271	Missing identification numbers on terminal strip (PW) inside the (EJB-200N1-08-L1-14). See attached photo.	.		Gtangianu 2025-01-16	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30002914	B	ELF-200N1-08-L1-01 C10001677	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002917	B	ELF-200N1-08-L1-04 C10001680	Missing traffolyte tag side instrument	.		APolo 2025-01-16			
C30002918	B	ELF-200N1-08-L1-04 C10001680	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002920	B	ELF-200N1-08-L1-04 C10001680	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-16			
C30002923	B	ELF-200N1-08-L1-05 C10001681	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002924	B	ELF-200N1-08-L1-05 C10001681	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-16			
C30002929	B	ELF-200N1-08-L1-03 C10001679	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17

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SYSTEM 83 Main Power Distribution Low Voltage 440 V

SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002930	B	ELF-200N1-08-L 1-03 C10001679	Missing traffolyte tag side instrument	.		APolo 2025-01-16			
C30002931	B	ELF-200N1-08-L 1-03 C10001679	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-16			
C30002941	B	ELF-200N1-08-L 1-03 C10001679	Missing piece of black PVC between side caps and glass	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002943	B	ELF-200N1-08-L 1-07 C10001683	The support is not well secured against vibration. another bracket needs to be added	.		APolo 2025-01-16			
C30002944	B	ELF-200N1-08-L 1-07 C10001683	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002945	B	ELF-200N1-08-L 1-15 C10001392	Missing traffolyte tag side instrument	.		APolo 2025-01-16			
C30002947	B	ELF-200N1-08-L 1-09 C10001685	Missing traffolyte tag side instrument	.		APolo 2025-01-16			
C30002948	B	ELF-200N1-08-L 1-09 C10001685	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002951	B	ELF-200N1-08-L 1-08 C10001684	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17

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SYSTEM 83 Main Power Distribution Low Voltage 440 V
SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002969	B	EJB-200N1-08-L1-11 C10001644	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990074 , but actual is 24P00297990014. See attached	.		Gtangianu 2025-01-16			
C30002973	B	EJB-200N1-08-L1-11 C10001644	The JB need to be cleaner front the door. See attached photo.	.		Gtangianu 2025-01-16			
C30002974	B	EJB-200N1-08-L1-11 C10001644	Missing identification numbers on terminal strip (PE) inside the (EJB-200N1-08-L1-11). See attached photo.	.		Gtangianu 2025-01-16			
C30003053	B	EJB-200N1-08-L1-03 C10001659	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990062, but actual is 24P00297990013. See attached	.		Gtangianu 2025-01-18			
C30003054	B	EJB-200N1-08-L1-03 C10001659	Missing identification numbers on terminal strip (N/PW/PE) inside the (EJB-200N1-08-L1-03). See attached photo.	.		Gtangianu 2025-01-18			
C30003055	B	EJB-200N1-08-L1-03 C10001659	Not enought threads are thightened between the lock nut and the Plug. See attached photo.	.		Gtangianu 2025-01-18			
C30003057	B	EJB-200N1-08-L1-09 C10001642	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990080, but actual is 24P00297990024. See attached	.		Gtangianu 2025-01-18			
C30003058	B	EJB-200N1-08-L1-09 C10001642	Missing identification numbers on terminal strip (L/PW/PE) inside the (EJB-200N1-08-L1-09). See attached photo.	.		Gtangianu 2025-01-18			
C30003063	B	ELF-200N1-08-L1-11 C10001687	trafolite tag is missing	.		AAndreani 2025-01-18			

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SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003064	B	ELF-200N1-08-L1-11 C10001687	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2025-01-18			
C30003065	B	ELF-200N1-08-L1-10 C10001686	The support is not well secured against vibration. another support needs to be added	.		Lmussi 2025-01-18			
C30003066	B	ELF-200N1-08-L1-10 C10001686	Equipment trafolite tag is missing	.		Lmussi 2025-01-18			
C30003094	B	EJB-200N1-08-L1-05 C10001638	Plugs are installed without lock nuts. See attached photo.	.		Gtangianu 2025-01-20			
C30003095	B	EJB-200N1-08-L1-05 C10001638	Missing identification numbers on terminal strip (PW/PE) inside the (EJB-200N1-08-L1-19). See attached photo.	.		Gtangianu 2025-01-20			
C30003096	B	EJB-200N1-08-L1-05 C10001638	"On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 4P00297990077, but actual is 24P00297990021. See attached	.		Gtangianu 2025-01-20			
C30003098	B	EJB-200N1-08-L1-08 C10001640	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990081 but actual is 24P00297990025. See attached	.		Gtangianu 2025-01-20			
C30003099	B	EJB-200N1-08-L1-08 C10001640	Plug are installed without lock nuts. See attached photo.	.		Gtangianu 2025-01-20			
C30003100	B	EJB-200N1-08-L1-08 C10001640	Missing identification numbers on terminal strip (PW) inside the (EJB-200N1-08-L1-08). See attached photo.	.		Gtangianu 2025-01-20			

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SYSTEM	83	Main Power Distribution Low Voltage 440 V
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ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003101	B	EJB-200N1-08-L1-06 C10001639	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 24P00297990078 but actual is 24P00297990022. See attached	.		Gtangianu 2025-01-20			
C30003102	B	EJB-200N1-08-L1-06 C10001639	Plugs are installed without lock nuts. See attached photo.	.		Gtangianu 2025-01-20			
C30003103	B	EJB-200N1-08-L1-06 C10001639	Missing identification numbers on terminal strip (N) inside the (EJB-200N1-08-L1-06). See attached photo.	.		Gtangianu 2025-01-20			
C30003104	B	EJB-200N1-08-L1-07 C10001641	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990079 but actual is 24P00297990023. See attached	.		Gtangianu 2025-01-20			
C30003105	B	EJB-200N1-08-L1-07 C10001641	Missing identification numbers on terminal strip (L/PE) inside the (EJB-200N1-08-L1-07). See attached photo.	.		Gtangianu 2025-01-20			
C30003106	B	EJB-200N1-08-L1-01 C10001657	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 24P00297990064 but actual is 24P00297990007. See attached	.		Gtangianu 2025-01-20			
C30003107	B	EJB-200N1-08-L1-01 C10001657	Missing identification numbers on terminal strip (N/PE) inside the (EJB-200N1-08-L1-01). See attached photo.	.		Gtangianu 2025-01-20			
C30003108	B	EJB-200N1-08-L1-01 C10001657	Plug are installed without lock nuts. See attached photo	.		Gtangianu 2025-01-20			
C30003148	B	ELF-200N1-08-L1-17 C10001691	missing trafolite tag	.		AAndreani 2025-01-22			

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ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003149	B	ELF-200N1-08-L1-17 C10001691	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2025-01-22			
C30003151	B	ELF-200N1-08-L1-12 C10001688	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2025-01-22			
C30003170	B	EJB-200N1-08-L1-12 C10001645	On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990073, but actual is 24P00297990015	.		AAndreani 2025-01-23			
C30003175	B	EJB-200N1-08-L1-04 C10001297	On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990065, but actual is 24P00297990008	.		GBertuccelli 2025-01-23			
C30003176	B	EJB-200N1-08-L1-04 C10001297	Identification tags on terminal block are missing	.		GBertuccelli 2025-01-23			
C30003177	B	EJB-200N1-08-L1-04 C10001297	Not enought threads are thightened on plug	.		GBertuccelli 2025-01-23			
C30003178	B	EJB-200N1-08-L1-10 C10001643	On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990075, but actual is 24P00297990026	.		GBertuccelli 2025-01-23			

Section 2 CONSOLIDATED PUNCH LISTS

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ROSETTI MARINO

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PUNCH LIST REPORT

SYSTEM	83	Main Power Distribution Low Voltage 440 V
SUBSYSTEM	83-35	Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002232	A	P-ELF-200N1-08-L1-22 C10000746	Not enought threads are thightened between the lock nut and the cable gland body.	.		AAndreani 2024-12-31	2025-01-16	Ecarotenuto 2025-01-16	2025-01-16
C30002233	A	P-ELF-200N1-08-L1-22 C10000746	outer sheath of cable is damaged on cable gland on JB side, cable gland to be redone, see attached foto	.		AAndreani 2024-12-31	2025-01-16	Gtangianu 2025-01-16	2025-01-16
C30002237	A	P-ELF-200N1-08-L1-21 C10000744	armour inside cable gland light side is oxidized	.		AAndreani 2024-12-31	2025-01-22	Pschintu 2025-01-22	2025-01-22
C30002238	A	P-ELF-200N1-08-L1-21 C10000744	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-23	Pschintu 2025-01-23	2025-01-23
C30002248	A	P-ELF-200N1-08-L1-20 C10000742	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002249	A	P-ELF-200N1-08-L1-20 C10000742	armour inside cable gland light side is oxidized and cable inside cable gland is found wet	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002250	A	P-ELF-200N1-08-L1-18 C10000738	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-16	Ecarotenuto 2025-01-16	2025-01-16
C30002263	A	P-ELF-200N1-08-L1-14 C10000730	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-13	Gtangianu 2025-01-13	2025-01-13
C30002271	A	P-ELF-200N1-08-L1-16 C10000734	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2024-12-31	2025-01-13	Gtangianu 2025-01-13	2025-01-13

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SYSTEM 83 Main Power Distribution Low Voltage 440 V

SUBSYSTEM 83-35 Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002290	A	P-ELF-200N1-08-L1-19 C10000740	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2025-01-02	2025-01-13	Gtangianu 2025-01-13	2025-01-13
C30002297	A	P-ELF-200N1-08-L1-13 C10000728	Not enought threads are thightened between the lock nut and the cable gland body. on JB side	.		AAndreani 2025-01-02	2025-01-16	Ecarotenuto 2025-01-16	2025-01-16
C30002984	A	P-EJB-200N1-08-L1-07 C10000716	Not enought threads are thightened between the lock nut and the cable gland body. (EJB-200N1-08-L1-07 side)	.		Pschintu 2025-01-16	2025-01-21	AAndreani 2025-01-21	2025-01-21
C30003067	A	P-ELF-200N1-08-L1-17 C10000736	cable gland to be redone, core inside light are too short for correct connection	.		AAndreani 2025-01-18	2025-01-21	AAndreani 2025-01-21	2025-01-21
C30001660	B	P-EJB-200N1-08-L1-04 C10000707	Core tag is missing for cable on on both panel and JB side	.		AAndreani 2024-12-11	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30001661	B	P-EJB-200N1-08-L1-04 C10000707	missing cable labelling on both JB and panel side	.		AAndreani 2024-12-11	2025-06-10	Ecarotenuto 2025-06-10	2025-06-10
C30002231	B	P-ELF-200N1-08-L1-22 C10000746	wrong SS cable tag on JB side, missing SS cable tag on light side	.		AAndreani 2024-12-31	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002234	B	ELF-200N1-08-L1-22 C10001696	trafolite tag is wrong, report tag on another normal light	.		AAndreani 2024-12-31	2025-02-25	AAndreani 2025-02-25	2025-02-25
C30002235	B	ELF-200N1-08-L1-22 C10001696	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17

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Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002236	B	ELF-200N1-08-L1-22 C10001696	The support is not well secured against vibration. Another support needs to be added	.		AAndreani 2024-12-31	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002239	B	P-ELF-200N1-08-L1-21 C10000744	missing SS cable tag on light side	.		AAndreani 2024-12-31	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002240	B	ELF-200N1-08-L1-21 C10001695	The support is not well secured against vibration. Another support needs to be added	.		AAndreani 2024-12-31	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002241	B	ELF-200N1-08-L1-21 C10001695	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002242	B	ELF-200N1-08-L1-21 C10001695	missing trafolite tag	.		AAndreani 2024-12-31	2025-02-25	AAndreani 2025-02-25	2025-02-25
C30002243	B	ELF-200N1-08-L1-20 C10001694	missing black plastic piece between coverand glass of the light	.		AAndreani 2024-12-31	2025-01-16	Lmussi 2025-01-16	2025-01-16
C30002244	B	ELF-200N1-08-L1-20 C10001694	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002245	B	ELF-200N1-08-L1-20 C10001694	The support is not well secured against vibration. Another support needs to be added	.		AAndreani 2024-12-31	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002246	B	ELF-200N1-08-L1-20 C10001694	missing trafolite tag	.		AAndreani 2024-12-31	2025-02-25	AAndreani 2025-02-25	2025-02-25

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Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002247	B	P-ELF-200N1-08-L1-20 C10000742	missing SS cable tag on light side	.		AAndreani 2024-12-31	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002251	B	P-ELF-200N1-08-L1-18 C10000738	wrong SS cable tag on JB side, missing SS cable tag on light side	.		AAndreani 2024-12-31	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002262	B	P-ELF-200N1-08-L1-14 C10000730	missing SS cable tag on ight side	.		AAndreani 2024-12-31	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002272	B	P-ELF-200N1-08-L1-16 C10000734	wrong SS cable tag on JB side, missing SS cable tag on light side	.		AAndreani 2024-12-31	2025-02-04	GBertuccelli 2025-02-04	2025-02-04
C30002291	B	P-ELF-200N1-08-L1-19 C10000740	missing SS cable tag on light side	.		AAndreani 2025-01-02	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002293	B	ELF-200N1-08-L1-19 C10001693	The support is not well secured against vibration. Another support needs to be added	.		AAndreani 2025-01-02	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002294	B	ELF-200N1-08-L1-19 C10001693	missing all lock nuts for stopped the lamp	.		AAndreani 2025-01-02	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002295	B	ELF-200N1-08-L1-19 C10001693	Trafolite tag is missing	.		AAndreani 2025-01-02	2025-02-25	AAndreani 2025-02-25	2025-02-25
C30002296	B	P-ELF-200N1-08-L1-13 C10000728	missing SS cable tag on light side	.		AAndreani 2025-01-02	2025-01-30	AAndreani 2025-01-30	2025-01-30

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Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002786	B	P-ELF-200N1-08-L1-02 C10000706	Missing cable tag SS , near ELF-200N1-08-L1-01 / ELF-200N1-08-L1-02	.		APolo 2025-01-14	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002789	B	P-ELF-200N1-08-L1-03 C10000710	Missing cable tag SS , near ELF-200N1-08-L1-03 / EJBF-200N1-08-L1-07	.		APolo 2025-01-14	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002790	B	P-ELF-200N1-08-L1-04 C10000711	Missing cable tag SS , near ELF-200N1-08-L1-04 / EJB-200N1-08-L1-05	.		APolo 2025-01-14	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002792	B	P-ELF-200N1-08-L1-05 C10000713	Missing cable tag SS , near ELF-200N1-08-L1-05 / EJB-200N1-08-L1-05	.		APolo 2025-01-14	2025-01-24	Lmussi 2025-01-24	2025-01-24
C30002794	B	P-ELF-200N1-08-L1-05 C10000713	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-14	2025-01-31	AAndreani 2025-01-31	2025-01-31
C30002801	B	P-ELF-200N1-08-L1-05 C10000713	The cable is not support .	.		APolo 2025-01-14	2025-01-31	AAndreani 2025-01-31	2025-01-31
C30002802	B	P-ELF-200N1-08-L1-07 C10000717	Missing cable tag SS , near ELF-200N1-08-L1-07 / EJB-200N1-08-L1-07	.		APolo 2025-01-14	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002804	B	P-ELF-200N1-08-L1-07 C10000717	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-14	2025-01-31	AAndreani 2025-01-31	2025-01-31
C30002805	B	P-ELF-200N1-08-L1-07 C10000717	The cable is not support .	.		APolo 2025-01-14	2025-01-31	GBertuccelli 2025-01-31	2025-01-31

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SUBSYSTEM 83-35 Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002856	B	P-ELF-200N1-08-L1-01 C10000705	Missing cable tag SS , near EJB-200N1-08-L1-01 / ELF-200N1-08-L1-01	.		APolo 2025-01-15	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002857	B	P-ELF-200N1-08-L1-06 C10000715	Missing cable tag SS , near EJB-200N1-08-L1-06 / ELF-200N1-08-L1-06	.		APolo 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002858	B	P-ELF-200N1-08-L1-08 C10000719	Missing cable tag SS , near EJB-200N1-08-L1-09 / ELF-200N1-08-L1-08	.		APolo 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002859	B	P-ELF-200N1-08-L1-08 C10000719	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-15	2025-01-31	GBertuccelli 2025-01-31	2025-01-31
C30002860	B	P-ELF-200N1-08-L1-09 C10000720	Missing cable tag SS , near EJB-200N1-08-L1-08 / ELF-200N1-08-L1-09	.		APolo 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002861	B	P-ELF-200N1-08-L1-09 C10000720	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-15	2025-01-31	GBertuccelli 2025-01-31	2025-01-31
C30002862	B	P-ELF-200N1-08-L1-15 C10000732	Missing cable tag SS , near ELF-200N1-08-L1-23 / ELF-200N1-08-L1-15	.		APolo 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002863	B	P-ELF-200N1-08-L1-06 C10000715	Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of	.		APolo 2025-01-15	2025-01-31	GBertuccelli 2025-01-31	2025-01-31
C30002864	B	P-ELF-200N1-08-L1-06 C10000715	The cable is not support .	.		APolo 2025-01-15	2025-01-31	GBertuccelli 2025-01-31	2025-01-31

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SYSTEM 83 Main Power Distribution Low Voltage 440 V
SUBSYSTEM 83-35 Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002883	B	P-EJB-200N1-08-L1-14 C10000733	Missing SS cable tag both side	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002884	B	P-EJB-200N1-08-L1-10 C10000725	Missing SS cable tag both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002885	B	P-EJB-200N1-08-L1-11 C10000727	Missing SS cable tag both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002886	B	P-EJB-200N1-08-L1-12 C10000729	Missing SS cable tag both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002887	B	P-EJB-200N1-08-L1-09 C10000723	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002888	B	P-EJB-200N1-08-L1-20 C10000745	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002889	B	P-EJB-200N1-08-L1-19 C10000743	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002890	B	P-EJB-200N1-08-L1-18 C10000741	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002891	B	P-EJB-200N1-08-L1-17 C10000739	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24

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SUBSYSTEM 83-35 Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002892	B	P-EJB-200N1-08-L1-15 C10000735	Missing SS cable tags both sides	.		Pschintu 2025-01-15	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002958	B	EJB-200N1-08-L1-20 C10001651	Missing identification numbers on terminal strip (PW/PE) inside the (EJB-200N1-08-L1-20). See attached photo.	.		Gtangianu 2025-01-16	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30002959	B	EJB-200N1-08-L1-20 C10001651	Not enought threads are thightened between the lock nut and the plugs. See attached photo.	.		Gtangianu 2025-01-16	2025-02-21	Gtangianu 2025-02-21	2025-02-21
C30002960	B	EJB-200N1-08-L1-17 C10001648	Not enought threads are thightened between the lock nut and the plug. See attached photo.	.		Gtangianu 2025-01-16	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30002961	B	EJB-200N1-08-L1-17 C10001648	Missing identification numbers on terminal strip N/(PW/PE) inside the (EJB-200N1-08-L1-17). See attached photo.	.		Gtangianu 2025-01-16	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30002980	B	P-EJB-200N1-08-L1-01 C10000610	Missing SS cable tags both sides	.		Pschintu 2025-01-16	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30002981	B	P-EJB-200N1-08-L1-05 C10000712	Missing SS cable tags both sides	.		Pschintu 2025-01-16	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002982	B	P-EJB-200N1-08-L1-06 C10000714	Missing SS cable tags both sides	.		Pschintu 2025-01-16	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002983	B	P-EJB-200N1-08-L1-07 C10000716	Missing SS cable tags both sides	.		Pschintu 2025-01-16	2025-01-30	GBertuccelli 2025-01-30	2025-01-30

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SUBSYSTEM 83-35 Emergency Lighting Upper Deck

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002985	B	P-EJB-200N1-08-L1-03 C10000718	Missing SS cable tag both sides	.		Pschintu 2025-01-16	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30002986	B	P-EJB-200N1-08-L1-08 C10000721	Missing SS cable tag both sides	.		Pschintu 2025-01-16	2025-01-24	GBertuccelli 2025-01-24	2025-01-24
C30002994	B	P-ELF-200N1-08-L1-24 C10004716	Missing SS cable tag both sides	.		Pschintu 2025-01-17	2025-02-25	AAndreani 2025-02-25	2025-02-25
C30002995	B	P-ELF-200N1-08-L1-25 C10004717	Missing SS cable tag both sides	.		Pschintu 2025-01-17	2025-02-25	AAndreani 2025-02-25	2025-02-25
C30003047	B	ELF-200N1-08-L1-25 C10004713	Light and cable are installed in temporary position due to missing mechanical support	.		Pschintu 2025-01-17	2025-03-25	Gtangianu 2025-03-25	2025-03-25
C30003048	B	ELF-200N1-08-L1-24 C10004712	Light and cable are installed in temporary position due to missing mechanical support	.		Pschintu 2025-01-17	2025-03-25	Gtangianu 2025-03-25	2025-03-25
C30003049	B	ELF-200N1-08-L1-24 C10004712	Missing traffolyte tag	.		Pschintu 2025-01-17	2025-01-31	GBertuccelli 2025-01-31	2025-01-31
C30003050	B	ELF-200N1-08-L1-25 C10004713	Missing traffolyte tag	.		Pschintu 2025-01-17	2025-01-31	GBertuccelli 2025-01-31	2025-01-31
C30003051	B	P-EJB-200N1-08-L1-16 C10000737	Missing SS cable tag both end	.		Pschintu 2025-01-17	2025-01-30	GBertuccelli 2025-01-30	2025-01-30

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CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003056	B	EJB-200N1-08-L1-19 C10001650	Missing identification numbers on terminal strip (L/PW/PE) inside the (EJB-200N1-08-L1-19). See attached photo.	.		Gtangianu 2025-01-18	2025-01-31	APolo 2025-01-31	2025-01-31
C30003060	B	P-ELF-200N1-08-L1-10 C10000722	On both JB (EJB-200N1-08-L1-08) and light (ELF-200N1-08-L1-10) SS cable tag is missing	.		Lmussi 2025-01-18	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30003061	B	P-ELF-200N1-08-L1-10 C10000722	On light side (ELF-200N1-08-L1-10) cable is entering the Light cable gland downwards while it should be upwards. On JB side bending radius of	.		Lmussi 2025-01-18	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30003062	B	P-ELF-200N1-08-L1-11 C10000724	missing SS cable tag on both JB and light side	.		AAndreani 2025-01-18	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30003068	B	P-ELF-200N1-08-L1-17 C10000736	missing SS cable tag on both JB and light side	.		AAndreani 2025-01-18	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30003138	B	EJB-200N1-08-L1-18 C10001649	Antivibration washer is missing on the plug.	.		Lmussi 2025-01-21	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30003150	B	P-ELF-200N1-08-L1-12 C10000726	missing SS cable tag on JB side	.		AAndreani 2025-01-22	2025-01-31	GBertuccelli 2025-01-31	2025-01-31
C30003168	B	P-ELF-200N1-08-L1-23 C10000708	missing SS cable tag on both JB and light side	.		AAndreani 2025-01-23	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003169	B	ELF-200N1-08-L1-23 C10001358	missing trafolite tag	.		AAndreani 2025-01-23	2025-02-28	AAndreani 2025-02-28	2025-02-28

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Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003182	B	EJB-200N1-08-L 1-19 C10001650	The support is not well secured against vibration. Another support needs to be added	.		GBertuccelli 2025-01-24	2025-03-07	Gtangianu 2025-03-07	2025-03-07

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ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002301	A	ELF-200N1-08-L1-13 C10001689	missing screw between enclosure and din rail, also missing the earthing continuity wire	.		AAndreani 2025-01-02	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002820	A	ELF-200N1-08-L1-02 C10001678	Missing the earth connection of the lamp and plate block/fixing	.		APolo 2025-01-14	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002866	A	ELF-200N1-08-L1-06 C10001682	Missing the earth connection of the lamp .	.		APolo 2025-01-15	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002909	A	ELF-200N1-08-L1-01 C10001677	Missing the earth connection .The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002922	A	ELF-200N1-08-L1-04 C10001680	Missing the earth connection. The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002942	A	ELF-200N1-08-L1-03 C10001679	Missing the earth connection. The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002946	A	ELF-200N1-08-L1-15 C10001392	Missing the earth connection . The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002949	A	ELF-200N1-08-L1-09 C10001685	The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-23	AAndreani 2025-01-23	2025-01-23
C30002950	A	ELF-200N1-08-L1-09 C10001685	Missing the earth connection inside the lamp between the cover and the lamp.	.		APolo 2025-01-16	2025-01-23	AAndreani 2025-01-23	2025-01-23

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C30002952	A	ELF-200N1-08-L1-08 C10001684	The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud	.		APolo 2025-01-16	2025-01-23	AAndreani 2025-01-23	2025-01-23
C30002953	A	ELF-200N1-08-L1-15 C10001392	Missing the earth connection inside the lamp between the cover and the lamp.	.		APolo 2025-01-16	2025-01-22	GBertuccelli 2025-01-22	2025-01-22
C30002256	B	ELF-200N1-08-L1-18 C10001692	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2024-12-31	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002257	B	ELF-200N1-08-L1-18 C10001692	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002259	B	ELF-200N1-08-L1-18 C10001692	trafolite tag is missing	.		AAndreani 2024-12-31	2025-02-25	AAndreani 2025-02-25	2025-02-25
C30002266	B	ELF-200N1-08-L1-14 C10001690	trafolite tag is missing	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002268	B	ELF-200N1-08-L1-14 C10001690	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002269	B	ELF-200N1-08-L1-14 C10001690	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2024-12-31	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002273	B	ELF-200N1-08-L1-16 C10001393	missing plug on pole support of light	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20

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CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002274	B	ELF-200N1-08-L 1-16 C10001393	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2024-12-31	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002275	B	ELF-200N1-08-L 1-16 C10001393	missing all lock nuts for stopped the lamp	.		AAndreani 2024-12-31	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002276	B	ELF-200N1-08-L 1-16 C10001393	Trafolite tag is missing	.		AAndreani 2024-12-31	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002298	B	ELF-200N1-08-L 1-13 C10001689	Trafolite tag is missing	.		AAndreani 2025-01-02	2025-01-20	GBertuccelli 2025-01-20	2025-01-20
C30002299	B	ELF-200N1-08-L 1-13 C10001689	missing all lock nuts for stopped the lamp	.		AAndreani 2025-01-02	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002300	B	ELF-200N1-08-L 1-13 C10001689	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2025-01-02	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002815	B	ELF-200N1-08-L 1-02 C10001678	Missing traffolyte tag side instrument	.		APolo 2025-01-14	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002816	B	ELF-200N1-08-L 1-02 C10001678	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-14	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002823	B	ELF-200N1-08-L 1-02 C10001678	Missing piece of black PVC between side caps and glass	.		APolo 2025-01-14	2025-01-17	Lmussi 2025-01-17	2025-01-17

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CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002867	B	ELF-200N1-08-L1-06 C10001682	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-15	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002874	B	ELF-200N1-08-L1-06 C10001682	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-15	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002876	B	ELF-200N1-08-L1-02 C10001678	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-15	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002878	B	EJB-200N1-08-L1-16 C10001647	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990069, but actual is 24P00297990018. See attached	.		Gtangianu 2025-01-15	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30002900	B	EJB-200N1-08-L1-16 C10001647	Missing identification numbers on terminal strip (N/PE) inside the (EJB-200N1-08-L1-16). See attached photo.	.		Gtangianu 2025-01-16	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30002902	B	EJB-200N1-08-L1-15 C10001646	Missing identification numbers on terminal strip (PE) inside the (EJB-200N1-08-L1-15). See attached photo.	.		Gtangianu 2025-01-16	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30002908	B	EJB-200N1-08-L1-15 C10001646	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990070, but actual is 24P00297990019. See attached	.		Gtangianu 2025-01-16	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30002910	B	ELF-200N1-08-L1-01 C10001677	Missing traffolyte tag side instrument	.		APolo 2025-01-16	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002911	B	EJB-200N1-08-L1-14 C10001271	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990071, but actual is 24P00297990017. See attached	.		Gtangianu 2025-01-16	2025-04-17	Gtangianu 2025-04-17	2025-04-17

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 83 Main Power Distribution Low Voltage 440 V
SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002912	B	ELF-200N1-08-L1-01 C10001677	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-16	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002913	B	EJB-200N1-08-L1-14 C10001271	Missing identification numbers on terminal strip (PW) inside the (EJB-200N1-08-L1-14). See attached photo.	.		Gtangianu 2025-01-16	2025-01-25	Ecarotenuto 2025-01-25	2025-01-25
C30002914	B	ELF-200N1-08-L1-01 C10001677	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002917	B	ELF-200N1-08-L1-04 C10001680	Missing traffolyte tag side instrument	.		APolo 2025-01-16	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002918	B	ELF-200N1-08-L1-04 C10001680	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002920	B	ELF-200N1-08-L1-04 C10001680	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-16	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002923	B	ELF-200N1-08-L1-05 C10001681	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002924	B	ELF-200N1-08-L1-05 C10001681	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-16	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002929	B	ELF-200N1-08-L1-03 C10001679	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 83 Main Power Distribution Low Voltage 440 V

SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002930	B	ELF-200N1-08-L1-03 C10001679	Missing traffolyte tag side instrument	.		APolo 2025-01-16	2025-01-30	AAndreani 2025-01-30	2025-01-30
C30002931	B	ELF-200N1-08-L1-03 C10001679	The support is not well secured against vibration. another bracket needs to be added.	.		APolo 2025-01-16	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002941	B	ELF-200N1-08-L1-03 C10001679	Missing piece of black PVC between side caps and glass	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002943	B	ELF-200N1-08-L1-07 C10001683	The support is not well secured against vibration. another bracket needs to be added	.		APolo 2025-01-16	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30002944	B	ELF-200N1-08-L1-07 C10001683	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002945	B	ELF-200N1-08-L1-15 C10001392	Missing traffolyte tag side instrument	.		APolo 2025-01-16	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30002947	B	ELF-200N1-08-L1-09 C10001685	Missing traffolyte tag side instrument	.		APolo 2025-01-16	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30002948	B	ELF-200N1-08-L1-09 C10001685	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17
C30002951	B	ELF-200N1-08-L1-08 C10001684	Missing all Lock Pin for stopped the lamp	.		APolo 2025-01-16	2025-01-17	Lmussi 2025-01-17	2025-01-17

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 83 Main Power Distribution Low Voltage 440 V
SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002969	B	EJB-200N1-08-L1-11 C10001644	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990074 , but actual is 24P00297990014. See attached	.		Gtangianu 2025-01-16	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30002973	B	EJB-200N1-08-L1-11 C10001644	The JB need to be cleaner front the door. See attached photo.	.		Gtangianu 2025-01-16	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30002974	B	EJB-200N1-08-L1-11 C10001644	Missing identification numbers on terminal strip (PE) inside the (EJB-200N1-08-L1-11). See attached photo.	.		Gtangianu 2025-01-16	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30003053	B	EJB-200N1-08-L1-03 C10001659	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990062, but actual is 24P00297990013. See attached	.		Gtangianu 2025-01-18	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30003054	B	EJB-200N1-08-L1-03 C10001659	Missing identification numbers on terminal strip (N/PW/PE) inside the (EJB-200N1-08-L1-03). See attached photo.	.		Gtangianu 2025-01-18	2025-01-31	APolo 2025-01-31	2025-01-31
C30003055	B	EJB-200N1-08-L1-03 C10001659	Not enought threads are thightened between the lock nut and the Plug. See attached photo.	.		Gtangianu 2025-01-18	2025-02-21	Gtangianu 2025-02-21	2025-02-21
C30003057	B	EJB-200N1-08-L1-09 C10001642	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990080, but actual is 24P00297990024. See attached	.		Gtangianu 2025-01-18	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30003058	B	EJB-200N1-08-L1-09 C10001642	Missing identification numbers on terminal strip (L/PW/PE) inside the (EJB-200N1-08-L1-09). See attached photo.	.		Gtangianu 2025-01-18	2025-01-31	APolo 2025-01-31	2025-01-31
C30003063	B	ELF-200N1-08-L1-11 C10001687	trafolite tag is missing	.		AAndreani 2025-01-18	2025-01-30	GBertuccelli 2025-01-30	2025-01-30

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 83 Main Power Distribution Low Voltage 440 V

SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003064	B	ELF-200N1-08-L1-11 C10001687	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2025-01-18	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30003065	B	ELF-200N1-08-L1-10 C10001686	The support is not well secured against vibration. another support needs to be added	.		Lmussi 2025-01-18	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30003066	B	ELF-200N1-08-L1-10 C10001686	Equipment trafolite tag is missing	.		Lmussi 2025-01-18	2025-01-30	GBertuccelli 2025-01-30	2025-01-30
C30003094	B	EJB-200N1-08-L1-05 C10001638	Plugs are installed without lock nuts. See attached photo.	.		Gtangianu 2025-01-20	2025-02-21	Gtangianu 2025-02-21	2025-02-21
C30003095	B	EJB-200N1-08-L1-05 C10001638	Missing identification numbers on terminal strip (PW/PE) inside the (EJB-200N1-08-L1-19). See attached photo.	.		Gtangianu 2025-01-20	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30003096	B	EJB-200N1-08-L1-05 C10001638	"On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 4P00297990077, but actual is 24P00297990021. See attached	.		Gtangianu 2025-01-20	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30003098	B	EJB-200N1-08-L1-08 C10001640	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990081 but actual is 24P00297990025. See attached	.		Gtangianu 2025-01-20	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30003099	B	EJB-200N1-08-L1-08 C10001640	Plug are installed without lock nuts. See attached photo.	.		Gtangianu 2025-01-20	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30003100	B	EJB-200N1-08-L1-08 C10001640	Missing identification numbers on terminal strip (PW) inside the (EJB-200N1-08-L1-08). See attached photo.	.		Gtangianu 2025-01-20	2025-02-06	GBertuccelli 2025-02-06	2025-02-06

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 83 Main Power Distribution Low Voltage 440 V
SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003101	B	EJB-200N1-08-L1-06 C10001639	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 24P00297990078 but actual is 24P00297990022. See attached	.		Gtangianu 2025-01-20	2025-04-02	Gtangianu 2025-04-02	2025-04-02
C30003102	B	EJB-200N1-08-L1-06 C10001639	Plugs are installed without lock nuts. See attached photo.	.		Gtangianu 2025-01-20	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30003103	B	EJB-200N1-08-L1-06 C10001639	Missing identification numbers on terminal strip (N) inside the (EJB-200N1-08-L1-06). See attached photo.	.		Gtangianu 2025-01-20	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30003104	B	EJB-200N1-08-L1-07 C10001641	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990079 but actual is 24P00297990023. See attached	.		Gtangianu 2025-01-20	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30003105	B	EJB-200N1-08-L1-07 C10001641	Missing identification numbers on terminal strip (L/PE) inside the (EJB-200N1-08-L1-07). See attached photo.	.		Gtangianu 2025-01-20	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30003106	B	EJB-200N1-08-L1-01 C10001657	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 24P00297990064 but actual is 24P00297990007. See attached	.		Gtangianu 2025-01-20	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30003107	B	EJB-200N1-08-L1-01 C10001657	Missing identification numbers on terminal strip (N/PE) inside the (EJB-200N1-08-L1-01). See attached photo.	.		Gtangianu 2025-01-20	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30003108	B	EJB-200N1-08-L1-01 C10001657	Plug are installed without lock nuts. See attached photo	.		Gtangianu 2025-01-20	2025-02-21	Gtangianu 2025-02-21	2025-02-21
C30003148	B	ELF-200N1-08-L1-17 C10001691	missing trafolite tag	.		AAndreani 2025-01-22	2025-02-25	AAndreani 2025-02-25	2025-02-25

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 83 Main Power Distribution Low Voltage 440 V

SUBSYSTEM 83-35 Emergency Lighting Upper Deck

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003149	B	ELF-200N1-08-L1-17 C10001691	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2025-01-22	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30003151	B	ELF-200N1-08-L1-12 C10001688	The support is not well secured against vibration. another support needs to be added	.		AAndreani 2025-01-22	2025-03-07	Gtangianu 2025-03-07	2025-03-07
C30003170	B	EJB-200N1-08-L1-12 C10001645	On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990073, but actual is 24P00297990015	.		AAndreani 2025-01-23	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30003175	B	EJB-200N1-08-L1-04 C10001297	On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990065, but actual is 24P00297990008	.		GBertuccelli 2025-01-23	2025-04-17	Gtangianu 2025-04-17	2025-04-17
C30003176	B	EJB-200N1-08-L1-04 C10001297	Identification tags on terminal block are missing	.		GBertuccelli 2025-01-23	2025-02-06	GBertuccelli 2025-02-06	2025-02-06
C30003177	B	EJB-200N1-08-L1-04 C10001297	Not enought threads are thightened on plug	.		GBertuccelli 2025-01-23	2025-03-11	JKrizanic 2025-03-11	2025-03-11
C30003178	B	EJB-200N1-08-L1-10 C10001643	On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990075, but actual is 24P00297990026	.		GBertuccelli 2025-01-23	2025-04-17	Gtangianu 2025-04-17	2025-04-17

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002982

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000714	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-06	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002983

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000716	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-07	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002984

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000716	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-07	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body. (EJB-200N1-08-L1-07 side)

Name: Paolo Schintu
Date: 2025-01-16
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-01-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002985

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000718	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-03	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tag both sides

Name: Paolo Schintu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002986

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000721	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-08	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tag both sides

Name: Paolo Schintu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002994

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004716	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-24	Emergency Lighting JB/Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tag both sides

Name: Paolo Schintu

Date: 2025-01-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-17
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002995

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004717	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-25	Emergency Lighting JB/Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tag both sides

Name: Paolo Schintu

Date: 2025-01-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-17
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003047

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004713	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-25	Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Light and cable are installed in temporary position due to missing mechanical support

Name: Paolo Schintu

Date: 2025-01-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-17
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed mecchanical support

Name: Giovanni Tangianu

Date: 2025-03-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003048

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004712	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-24	Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Light and cable are installed in temporary position due to missing mechanical support

Name: Paolo Schintu
Date: 2025-01-17
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-17
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Installed mecchanical support

Name: Giovanni Tangianu
Date: 2025-03-25
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003049

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004712	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-24	Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing traffolyte tag

Name: Paolo Schintu

Date: 2025-01-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-17
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-31

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003050

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004713	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-25	Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing traffolyte tag

Name: Paolo Schintu

Date: 2025-01-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-17
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-31

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003051

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000737	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-16	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tag both end

Name: Paolo Schintu

Date: 2025-01-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-17
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003053

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001659	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-03	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990062, but actual is 24P00297990013. See attached photo. .

Name: Giovanni Tangianu

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

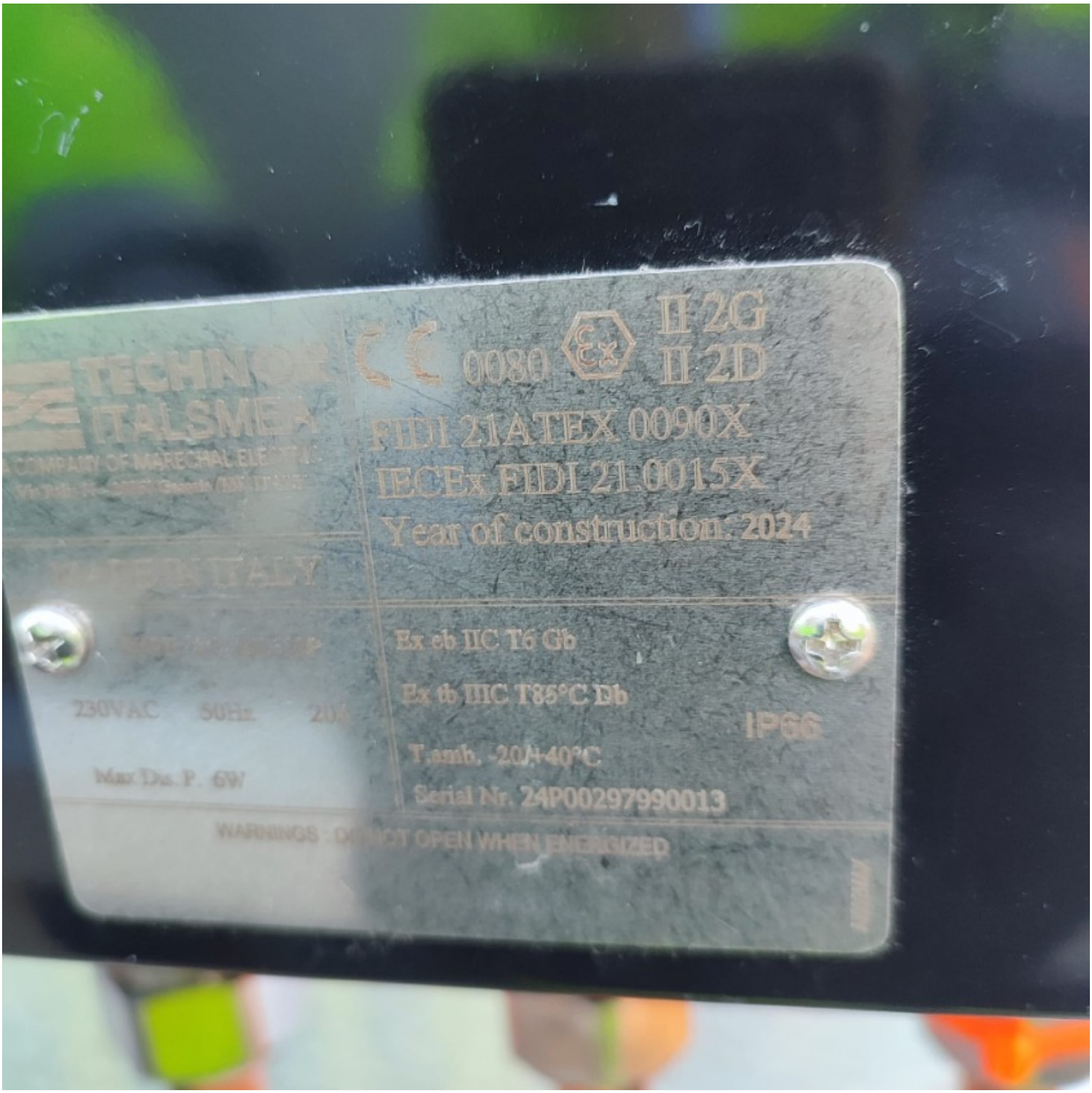
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


TECHNO
ITALSME
0080
II 2G
II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
ITALY
Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
230VAC 50Hz 20A
Max Dis. P. 6W
T amb. -20/+40°C
Serial Nr. 24P00297990013
WARNINGS


EJB-200N1-08-L1-03
CORTEC
Date Installed 22/11/24
Replacement Date 23/11/25

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003054

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001659	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-03	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (N/PW/PE) inside the (EJB-200N1-08-L1-03). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-31

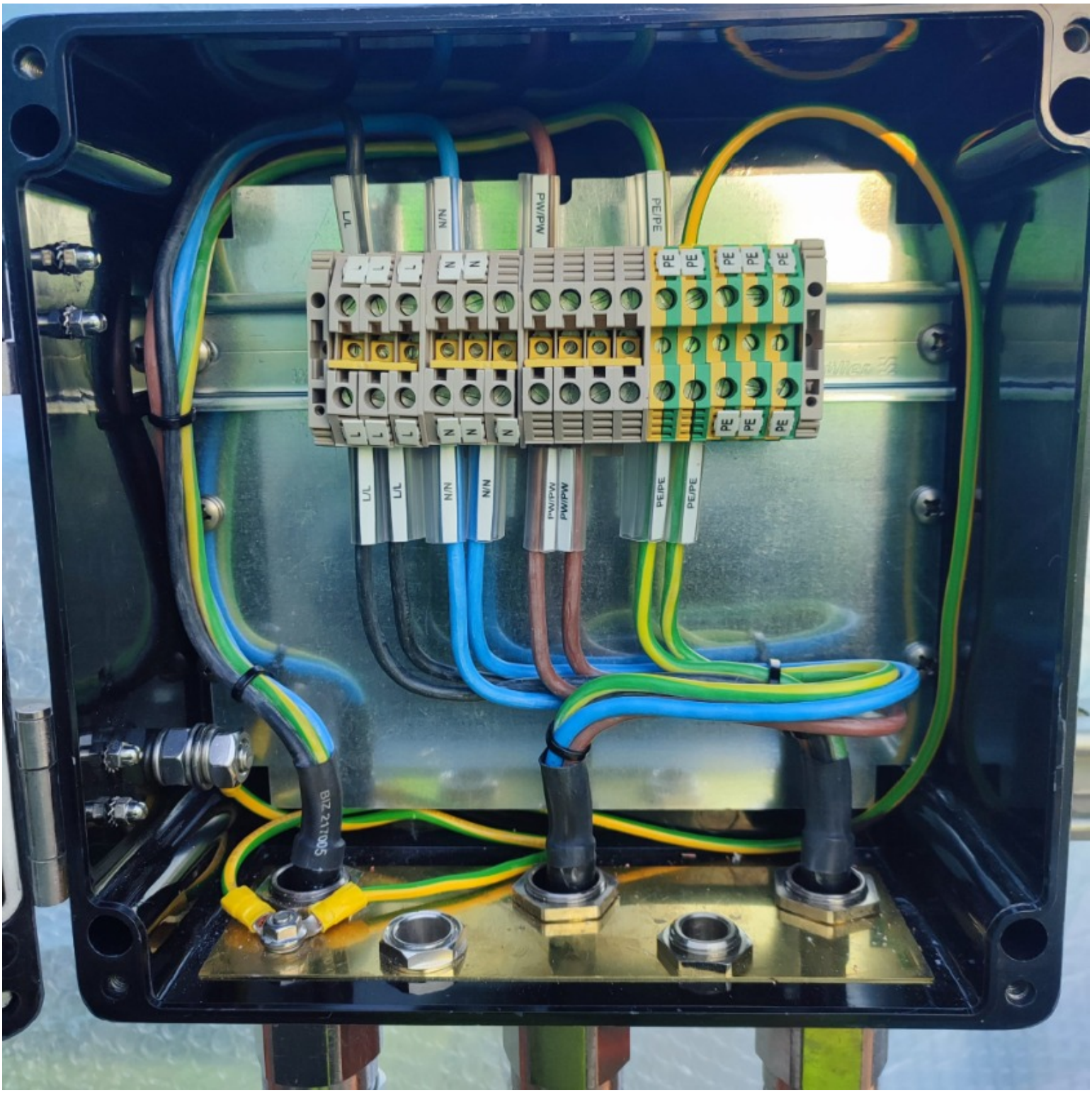
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L/L
N/N
PW/PW
PE/PE
PE
N
L
L/L
N/N
PW/PW
3d/3d
PE/PE
BIZ 21705

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003055

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001659	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-03	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the Plug.
See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-18
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

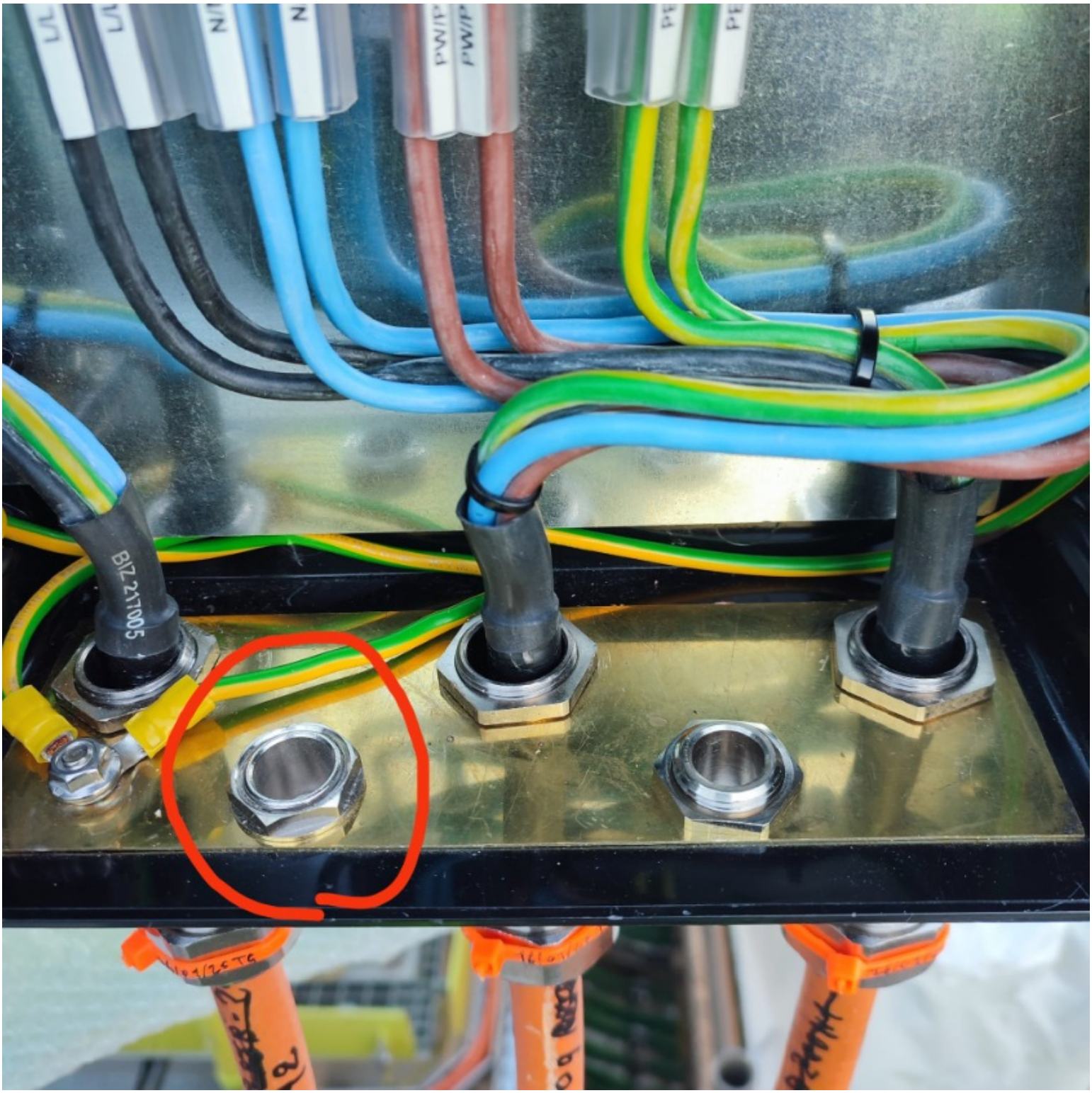
5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu
Date: 2025-02-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


BIZ2170S

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003056

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001650	1.4 Discipline	Electrical
1.2 Item	EJB-200N1-08-L1-19		JB - EMERGENCY LIGHTING
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Missing identification numbers on terminal strip (L/PW/PE) inside the (EJB-200N1-08-L1-19). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-31

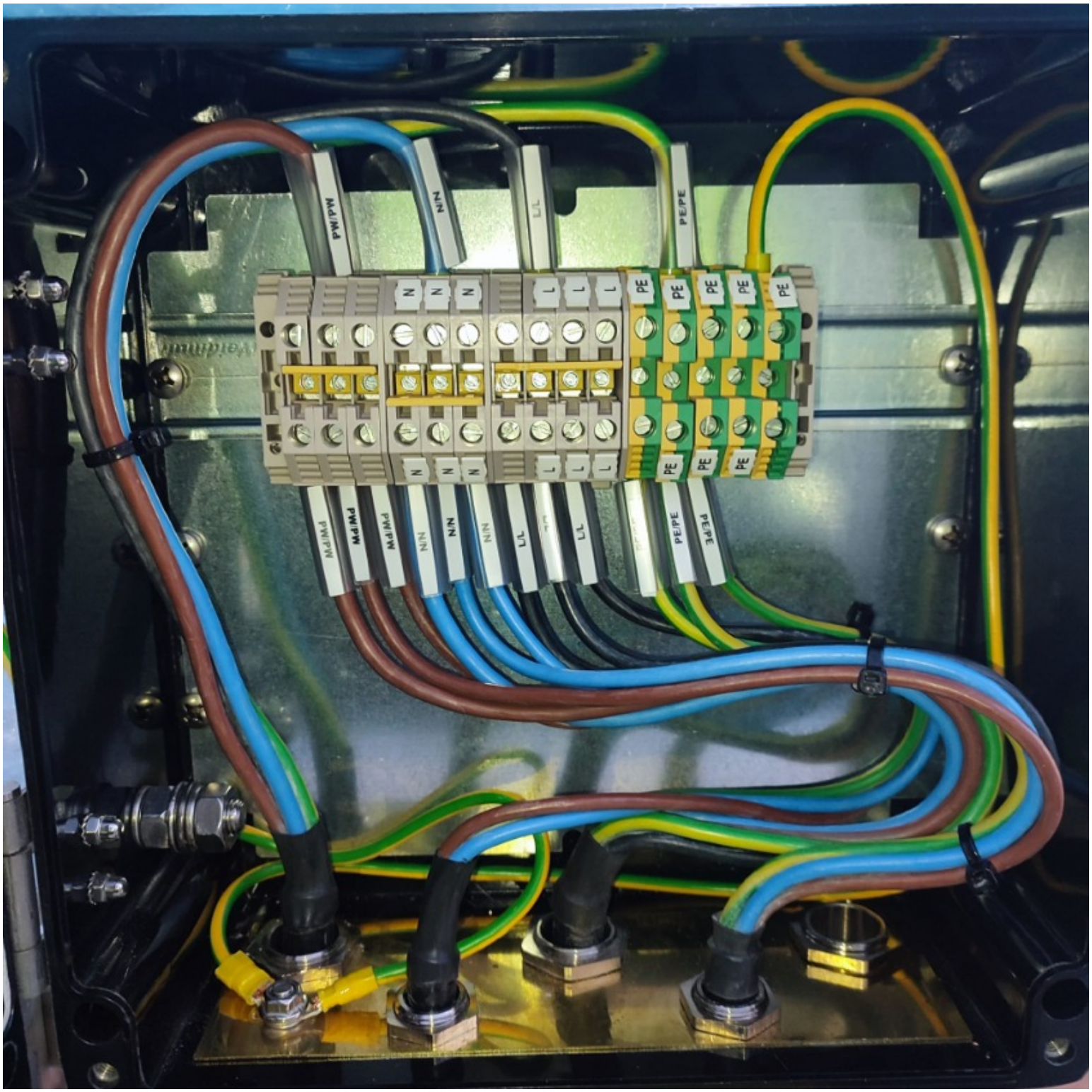
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


PW/PW
N/N
L/L
PE/PE
N
L
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003057

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001642	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-09	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990080, but actual is 24P00297990024. See attached photo. .

Name: Giovanni Tangianu
Date: 2025-01-18
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu
Date: 2025-04-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


CE 0080
II 2G
II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
Ex tb IIIC T85°C
IP66
DO NOT OPEN WHEN ENERGISED


EJB-200N1-08-L1-09
CORTEC
Date Installed 22/11/25
Replacement Date 22/11/25

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003058

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001642	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-09	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (L/PW/PE) inside the (EJB-200N1-08-L1-09). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-31

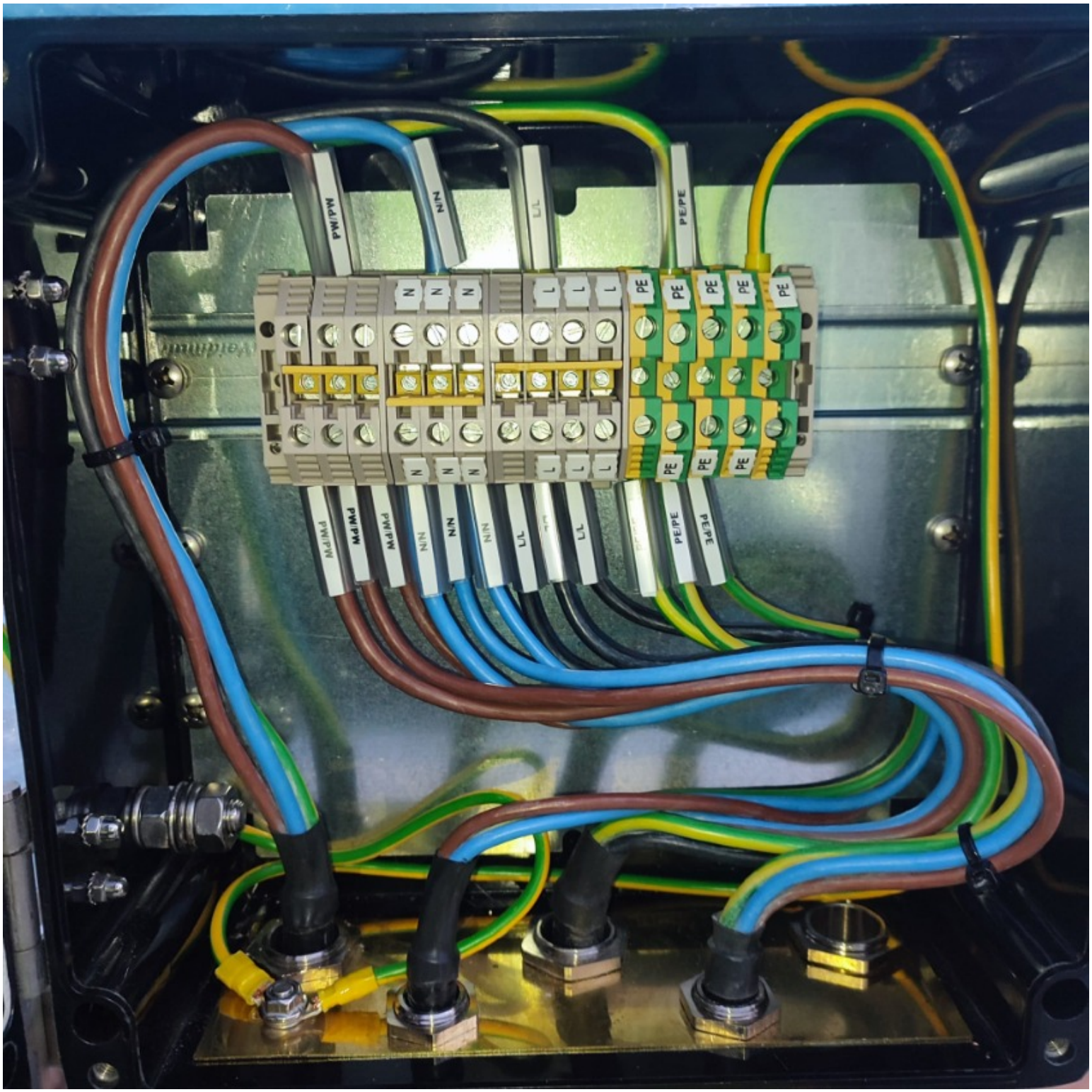
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


PW/PW
N/N
L/L
PE/PE
N
L
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003060

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000722	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-10	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On both JB (EJB-200N1-08-L1-08) and light (ELF-200N1-08-L1-10) SS cable tag is missing

Name: Luca Mussi

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003061

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000722	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-10		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

On light side (ELF-200N1-08-L1-10) cable is entering the Light cable gland downwards while it should be upwards.

On JB side bending radius of the cable to be corrected on cable gland ingress under JB

Name: Luca Mussi

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003062

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000724	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-11		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on both JB and light side

Name: Andrea Andreani

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003063

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001687	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-11	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

trafolite tag is missing

Name: Andrea Andreani

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003064

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001687	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-11	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another support needs to be added

Name: Andrea Andreani

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003065

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001686	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-10	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another support needs to be added

Name: Luca Mussi
Date: 2025-01-18
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu
Date: 2025-03-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003066

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001686	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-10	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Equipment trafolite tag is missing

Name: Luca Mussi

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003067

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000736	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-17	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

cable gland to be redone, core inside light are too short for correct connection

Name: Andrea Andreani

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003068

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000736	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-17		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on both JB and light side

Name: Andrea Andreani

Date: 2025-01-18

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-18
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003094

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001638	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-05	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Plugs are installed without lock nuts.
See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

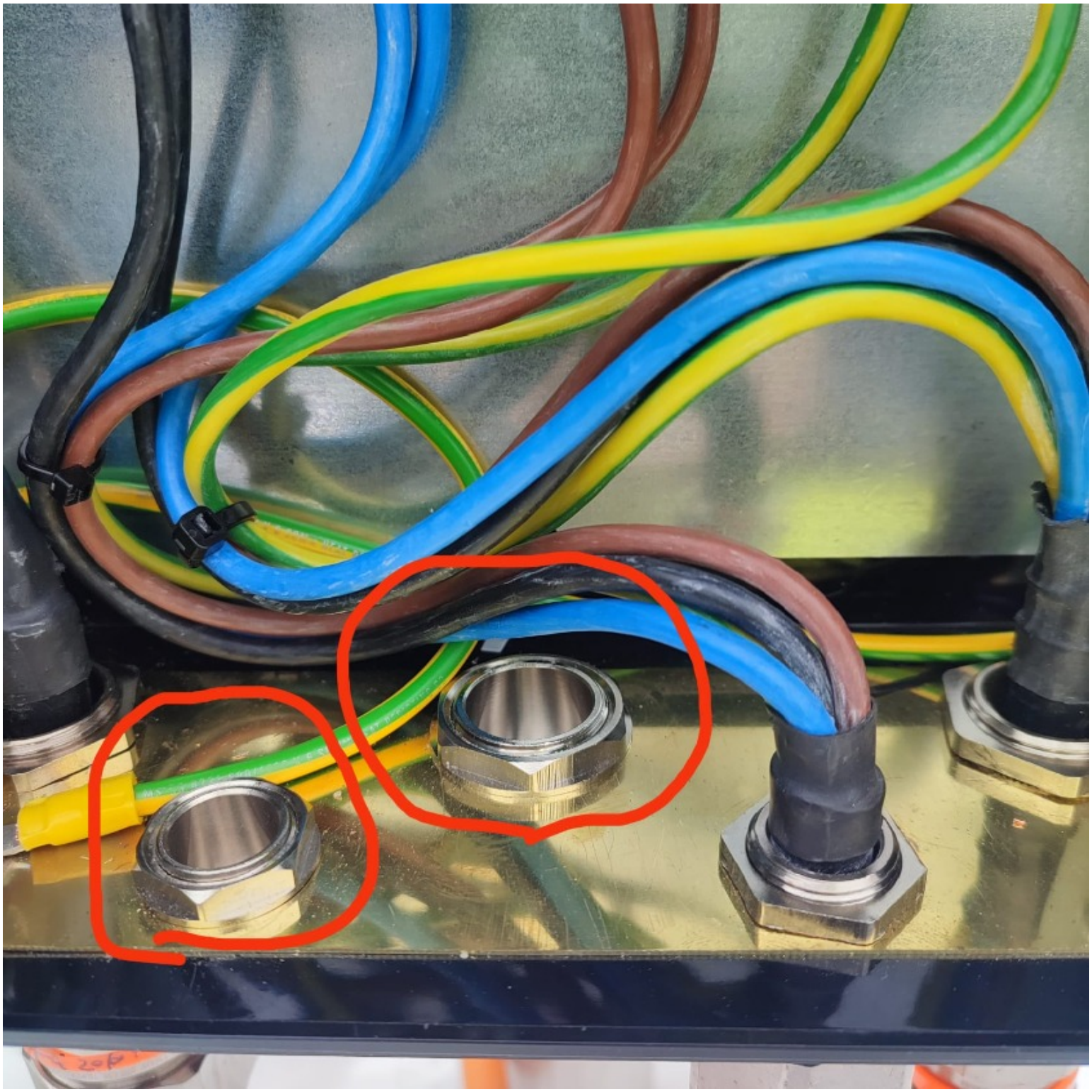
5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu
Date: 2025-02-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003095

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001638	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-05	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (PW/PE) inside the (EJB-200N1-08-L1-19). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

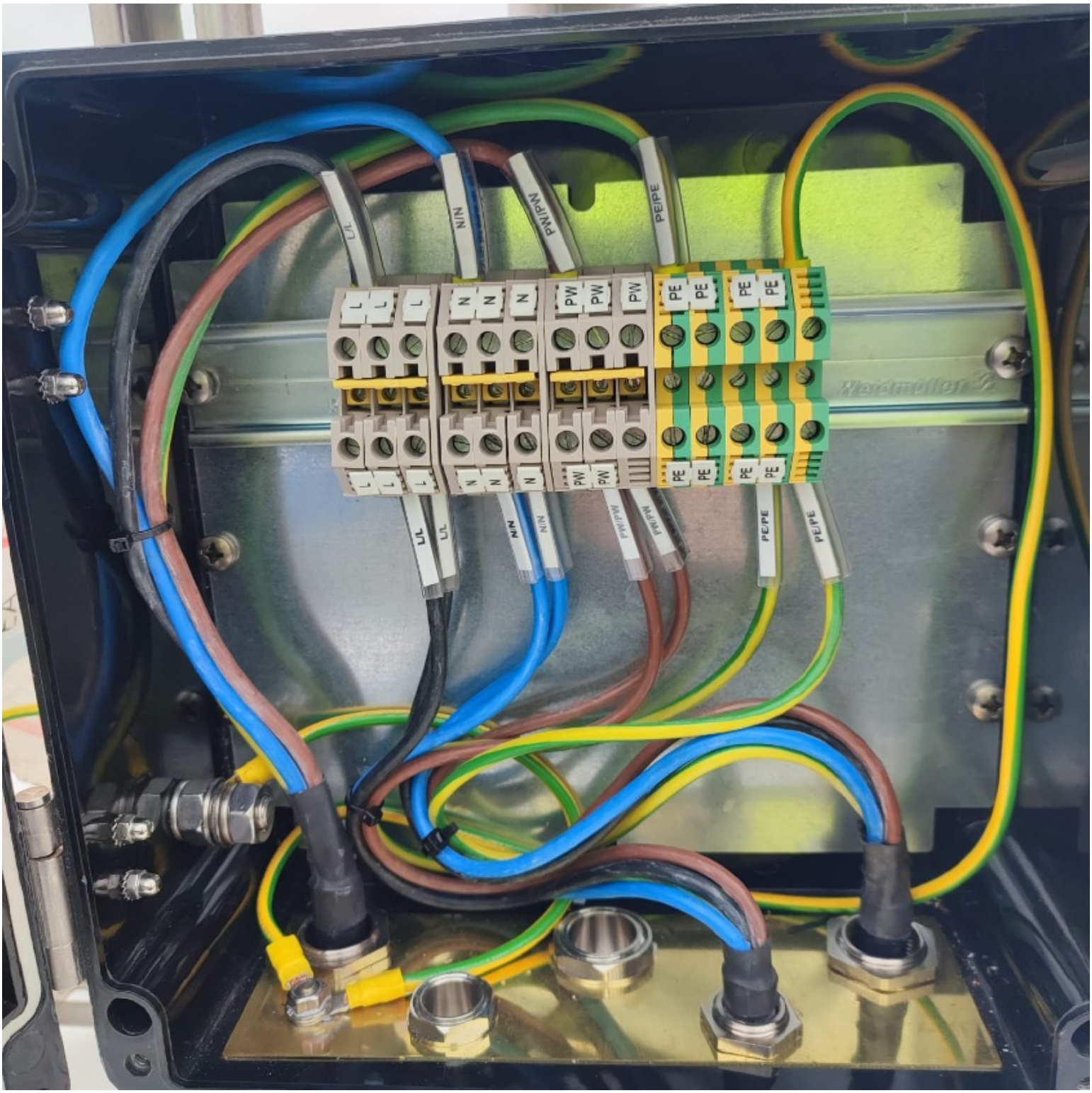
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L
N
PW
PE
L/L
N/N
PW/PW
PE/PE
Weidmüller

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003096

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001638	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-05		JB - EMERGENCY LIGHTING
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

"On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 4P00297990077, but actual is 24P00297990021. See attached photo. .
"

Name: Giovanni Tangianu
Date: 2025-01-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name
Date
Signature

5 - CLEARANCE CHECK

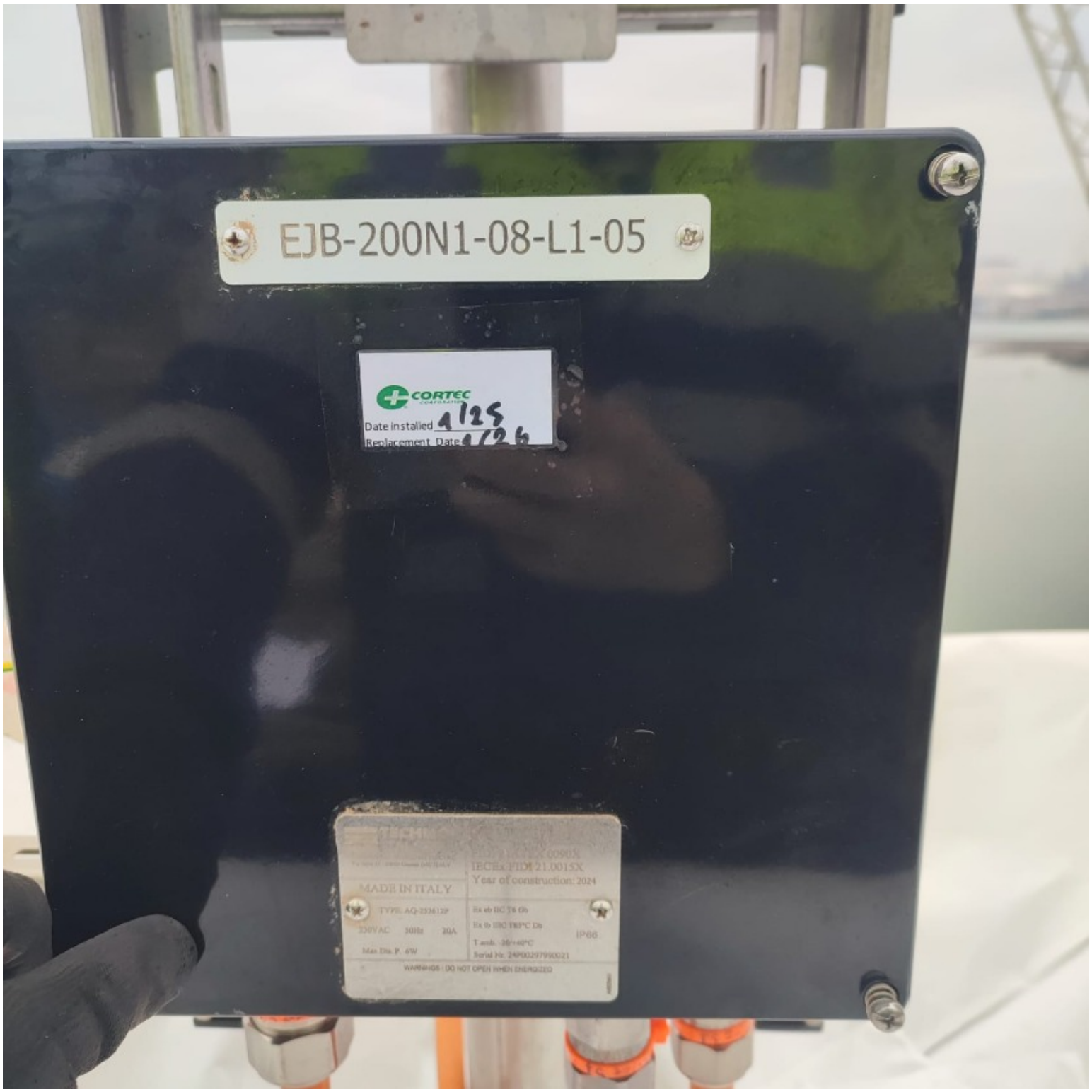
ATEX register updated.

Name: Giovanni Tangianu
Date: 2025-04-17
Signature

6- CLEARANCE APPROVAL

Name
Date
Signature


TECHNOR
ITALSMEA
CE 0080
II 2G
II 2D
FIDI 21ATEX 0050X
IECEx FIDI 21.0015X
MADE IN ITALY
T amb. -20/+40°C
IP66
Serial Nr. 24P00297990021
OPEN WHEN ENERGIZED
A0022MAX


EJB-200N1-08-L1-05
CORTEC
Date Installed 4/25
Replacement Date 4/26
MADE IN ITALY
IECEx FIDI 21.0015X
Year of construction: 2024
IP66

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003098

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001640	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-08	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990081 but actual is 24P00297990025. See attached photo. . "

Name: Giovanni Tangianu
Date: 2025-01-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

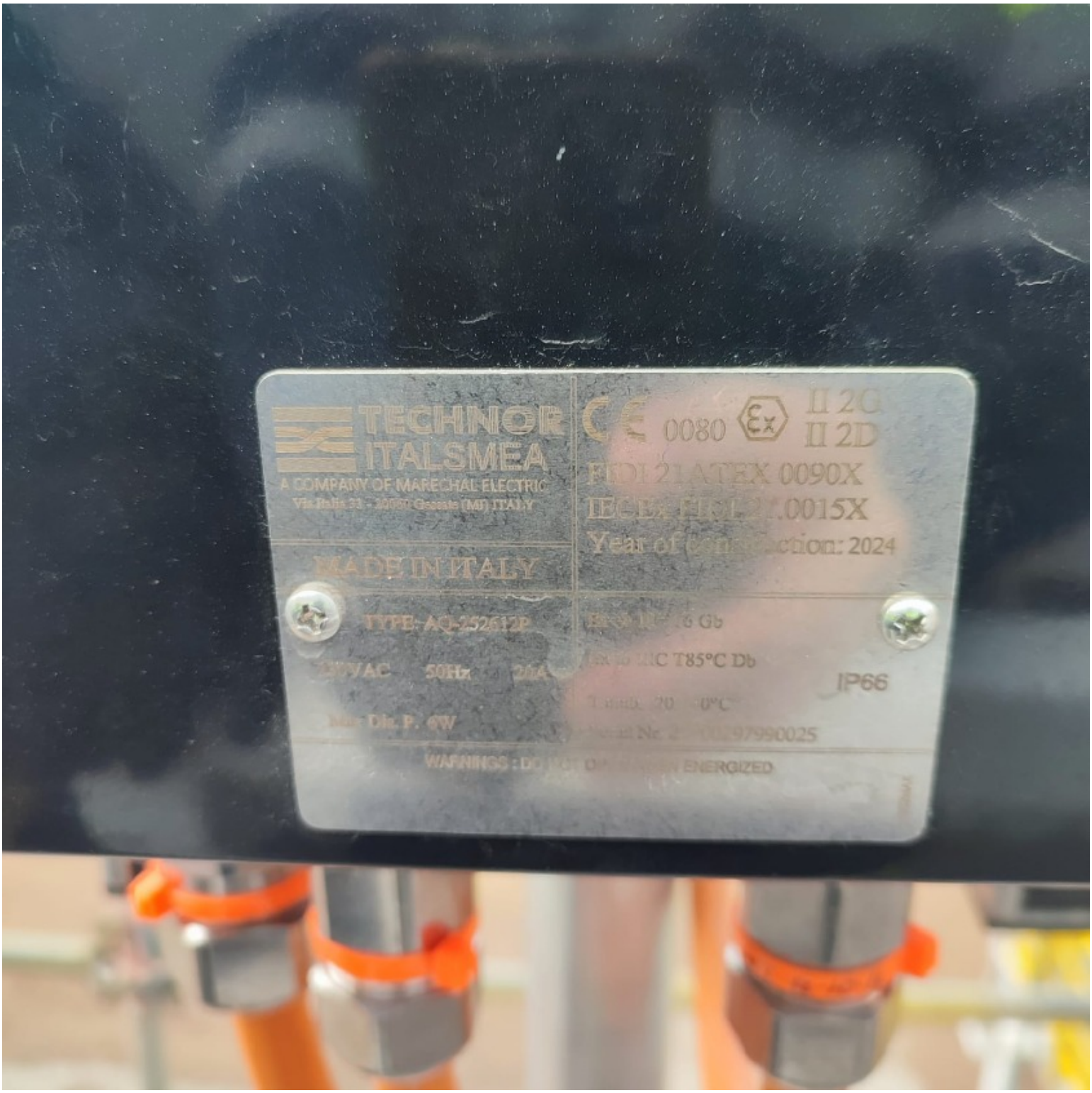
5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu
Date: 2025-04-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


TECHNOR
ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
MADE IN ITALY
TYPE: AQ-252612P
IP66
WARNINGS : DO NOT
ENERGIZED
0080
II 2G
II 2D
Year of
tion: 2024


EJB-200N1-08-L1-08
CORTEC
Date installed 26/11/24
Replacement Date 26/11/25
TECHNOR
ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
MADE IN ITALY
CE 0080 II 2G
II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003099

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001640	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-08	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Plug are installed without lock nuts. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

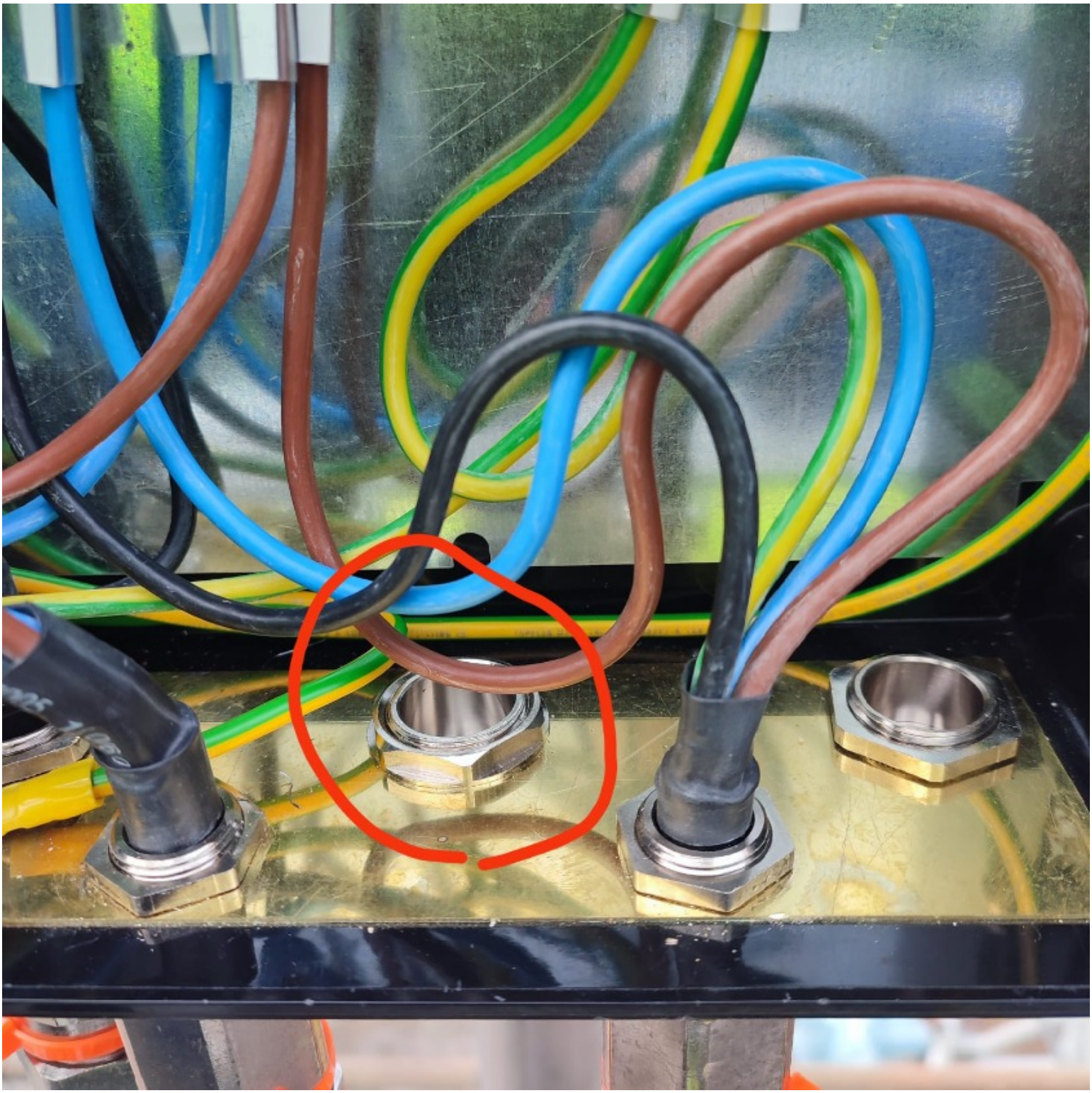
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003100

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001640	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-08	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (PW) inside the (EJB-200N1-08-L1-08). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

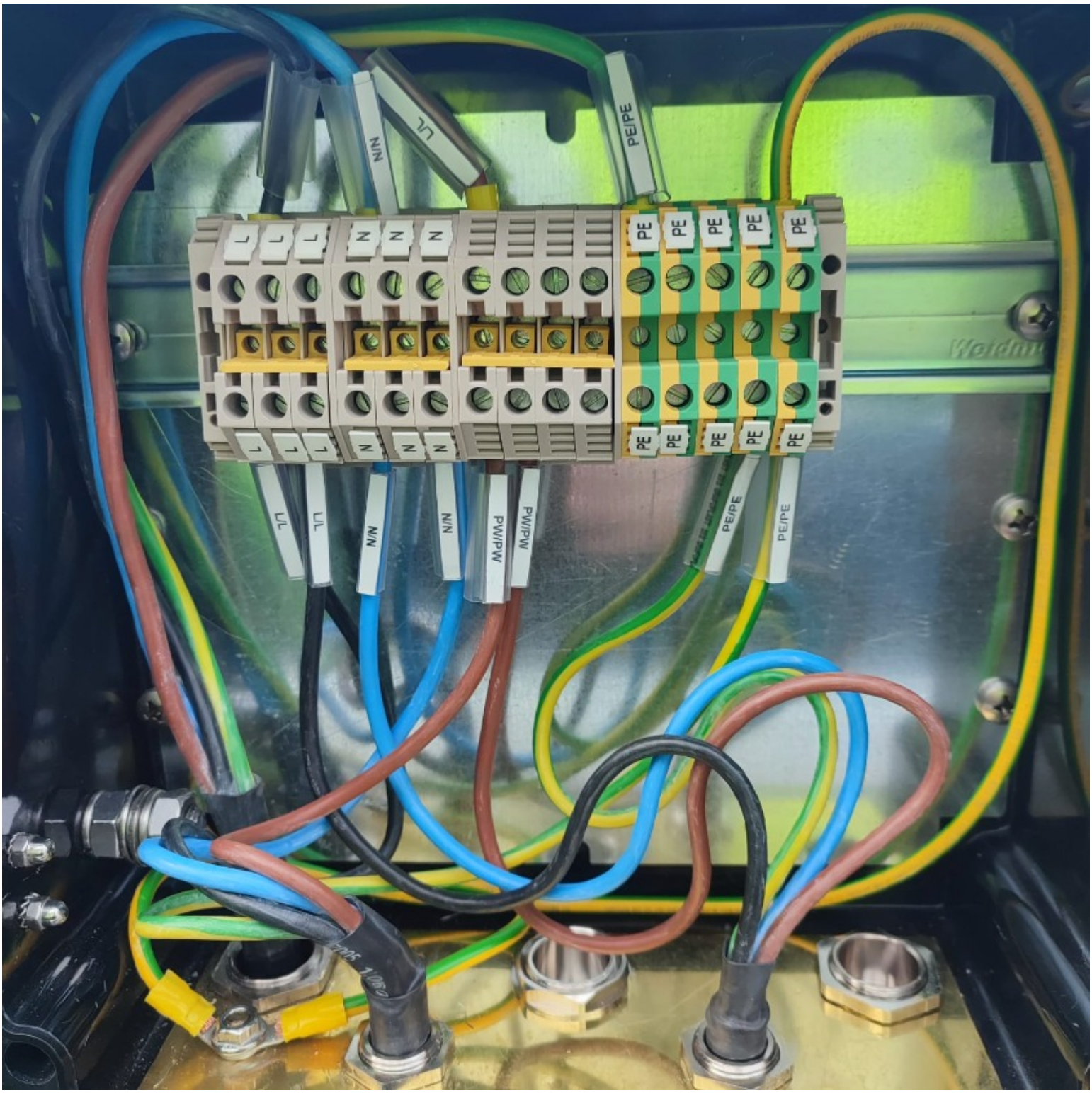
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L
N
PE
L/L
N/N
PE/PE
PW/PW

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003101

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001639	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-06	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 24P00297990078 but actual is 24P00297990022. See attached photo. . "

Name: Giovanni Tangianu
Date: 2025-01-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

ATEX register updated

Name: Giovanni Tangianu
Date: 2025-04-02
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


TECHNOR
ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
CE 0080
II 2G
II 2D
FIDI 21ATEX 0090
IECEx FIDI 21.00
IP66
24P00297990023


EJB-200N1-08-L1-06
CORTEC
Date installed 1/25
Replacement Date 1/26

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003102

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001639	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-06	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Plugs are installed without lock nuts. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

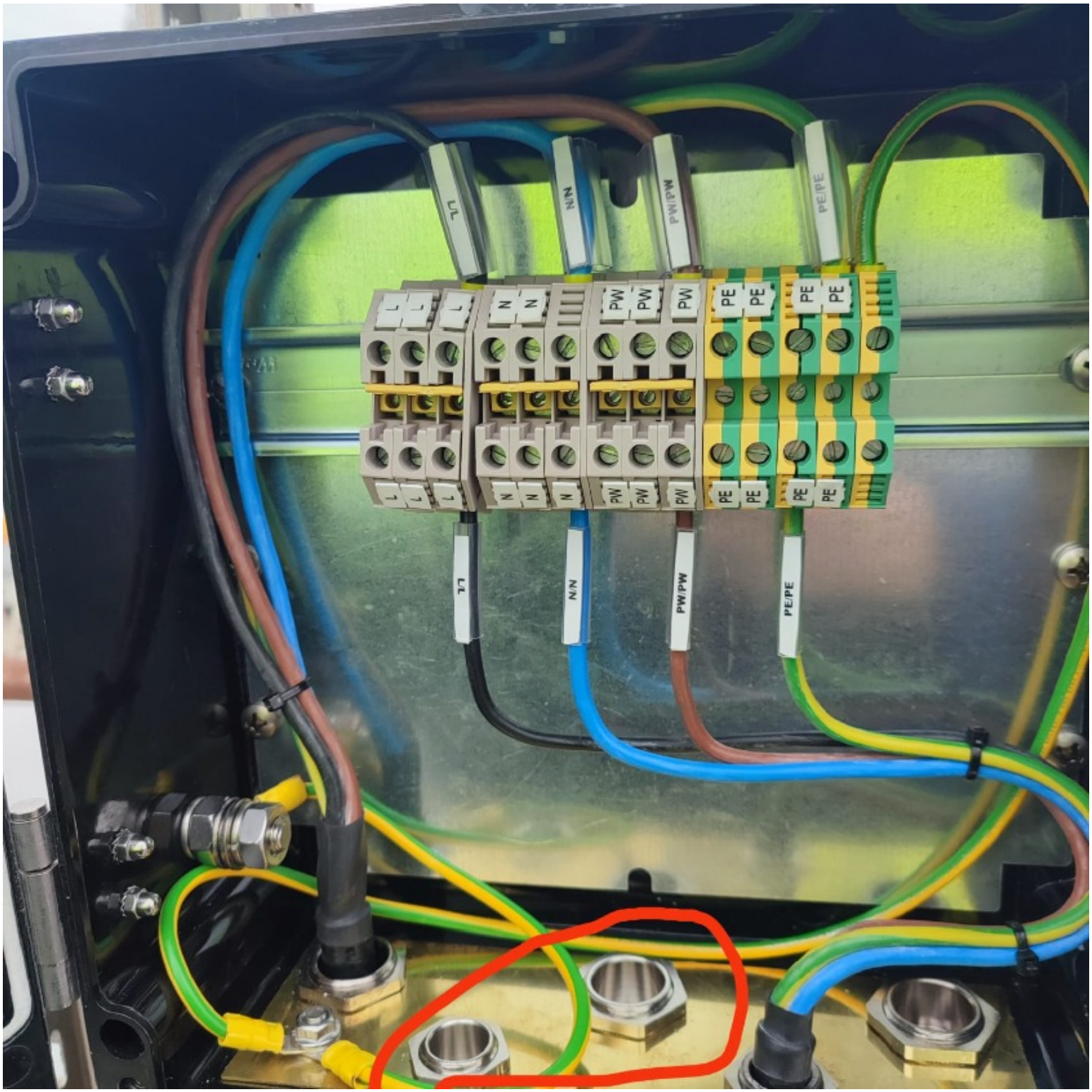
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L/L
N/N
PW/PW
PE/PE
L
N
PW
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003103

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001639	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-06	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (N) inside the (EJB-200N1-08-L1-06). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

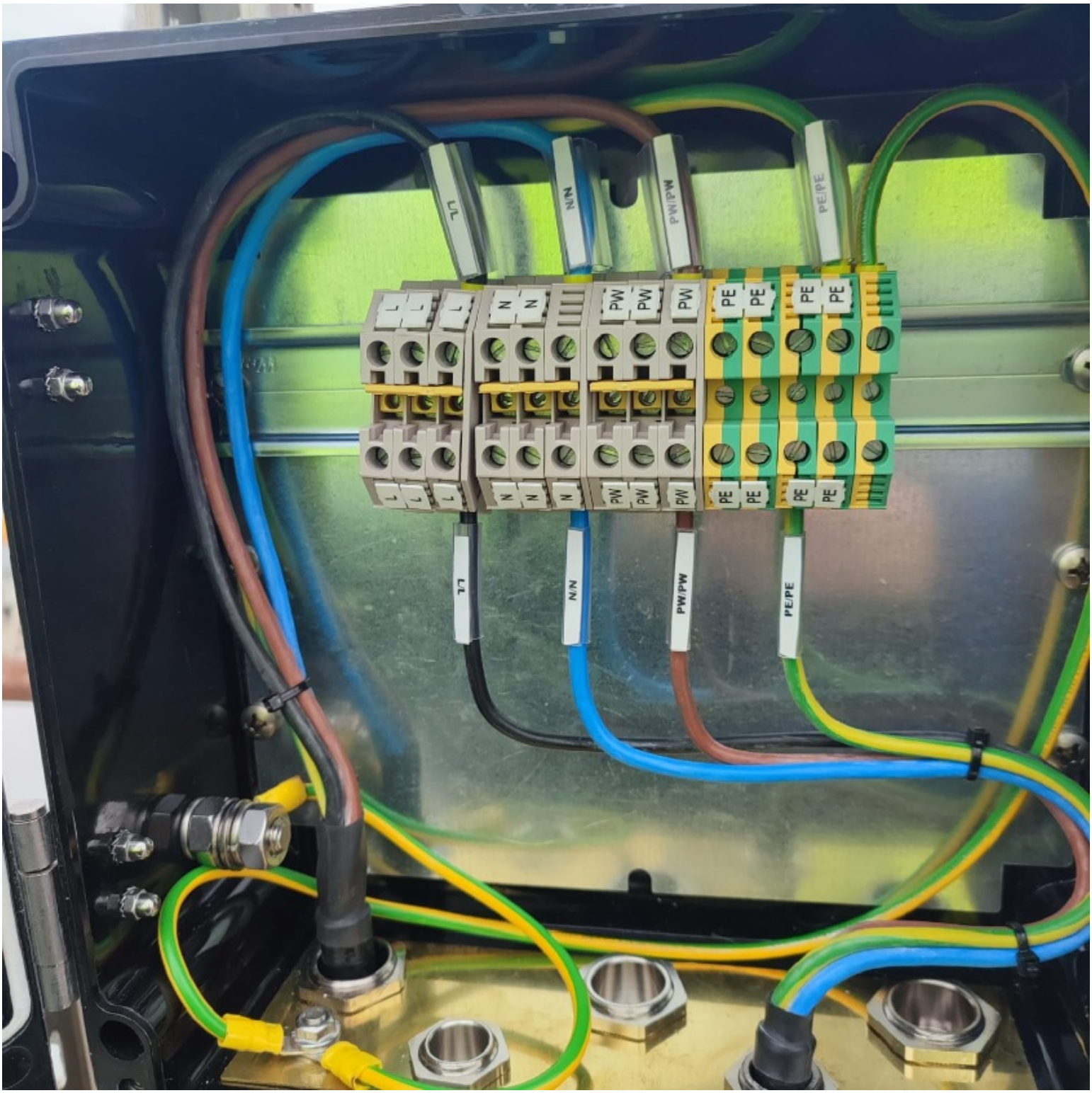
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L/L
N/N
PW/PW
PE/PE
L
N
PW
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003104

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001641	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-07	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990079 but actual is 24P00297990023. See attached photo. . "

Name: Giovanni Tangianu
Date: 2025-01-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu
Date: 2025-04-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


TECHNOR
ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
MADE IN ITALY
TYPE: AQ-252612P
Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
T.amb. -20/+40°C
IP66
Serial Nr. 24P00297990023
WARNINGS : DO NOT OPEN WHEN ENERGIZED


EJB-200N1-08-L1-07
CORTEC
Date Installed 1/25
Replacement Date 1/26
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
MADE IN ITALY
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W
CE 0080 II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
T.amb. -20/+30°C
IP66
Serial Nr. 24P00297990023
WARNING : DO NOT OPEN WHEN ENERGIZED

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003105

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001641	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-07	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (L/PE) inside the (EJB-200N1-08-L1-07). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

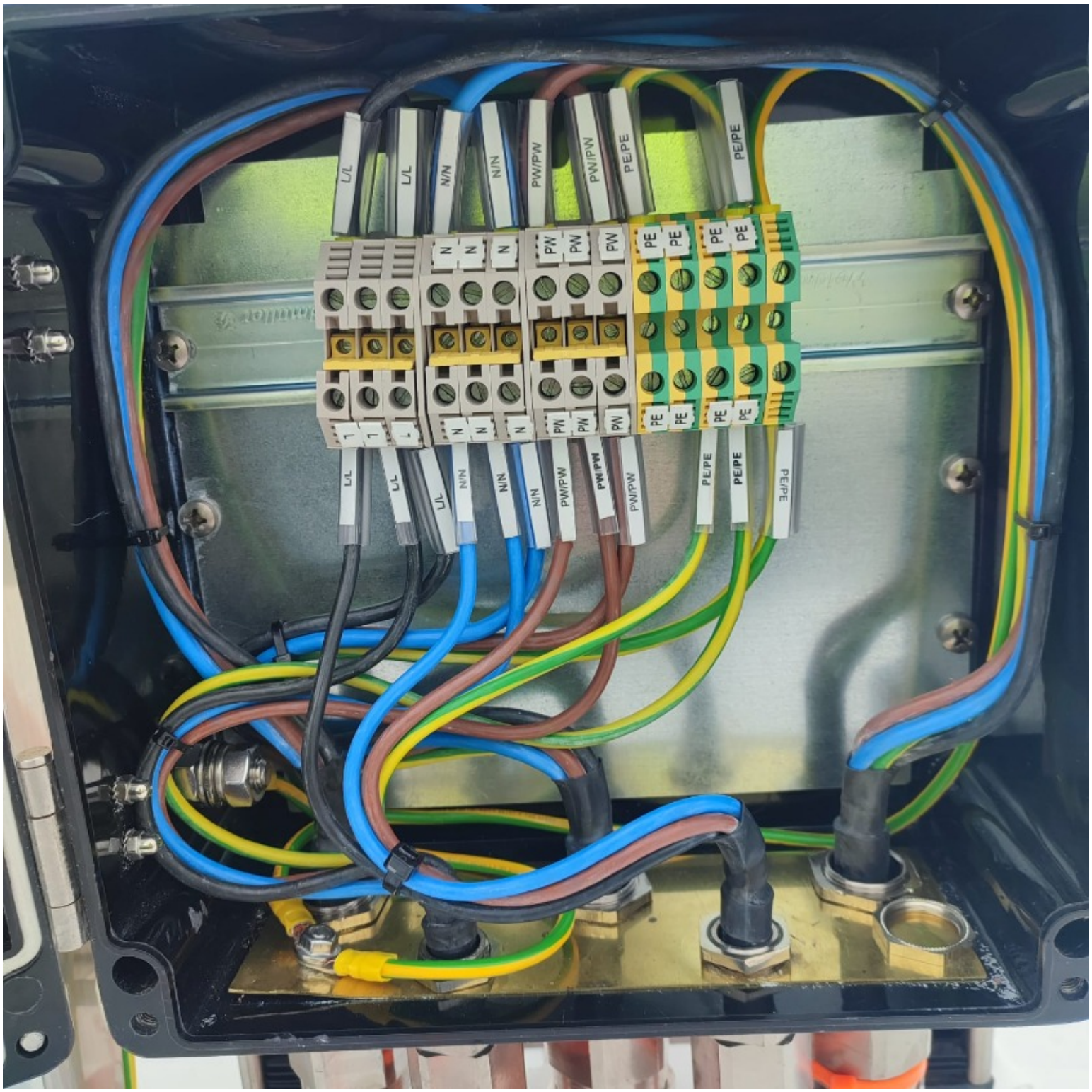
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L/L
L/L
N/N
N/N
PW/PW
PW/PW
PE/PE
PE/PE
N
PW
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003106

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001657	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-01	JB Emergency Lighting Upper Deck - Circuit No. 1	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 19) JB Serial Number is 24P00297990064 but actual is 24P00297990007. See attached photo. . "

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

Signature:

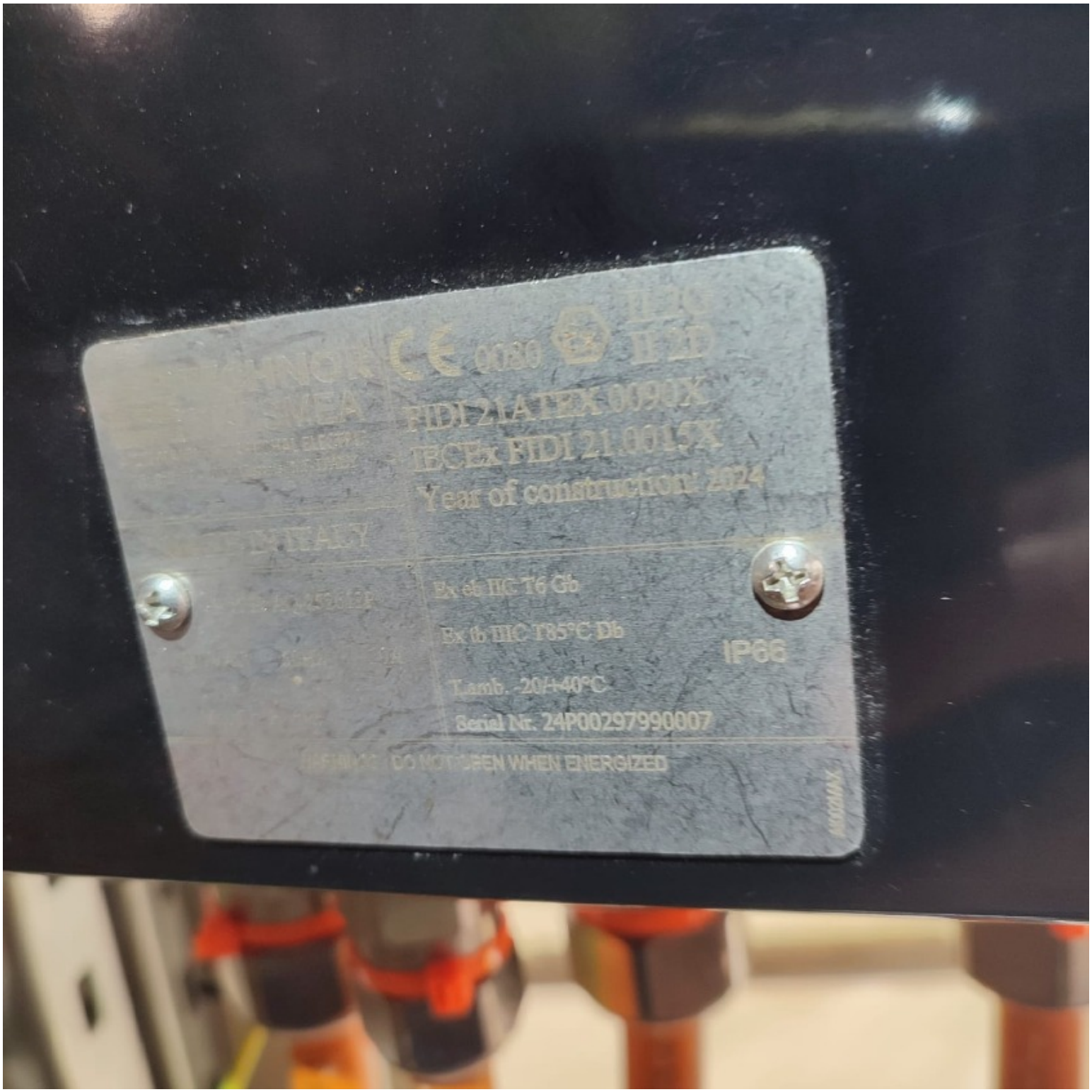
6- CLEARANCE APPROVAL

Name:

Date:

Signature:


EJB-200N1-08-L1-01
CORTEC
Date Installed 26/11/25
Replacement Date 26/11/25
TECHNOR ITALSWEA
MADE IN ITALY


0080
FIDI 21ATEX0090X
IECEx FIDI 21.0015X
Year of construction: 2024
Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T amb. -20/+40°C
Serial Nr. 24P00297990007
DO NOT OPEN WHEN ENERGIZED

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003107

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001657	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-01	JB Emergency Lighting Upper Deck - Circuit No. 1	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (N/PE) inside the (EJB-200N1-08-L1-01). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

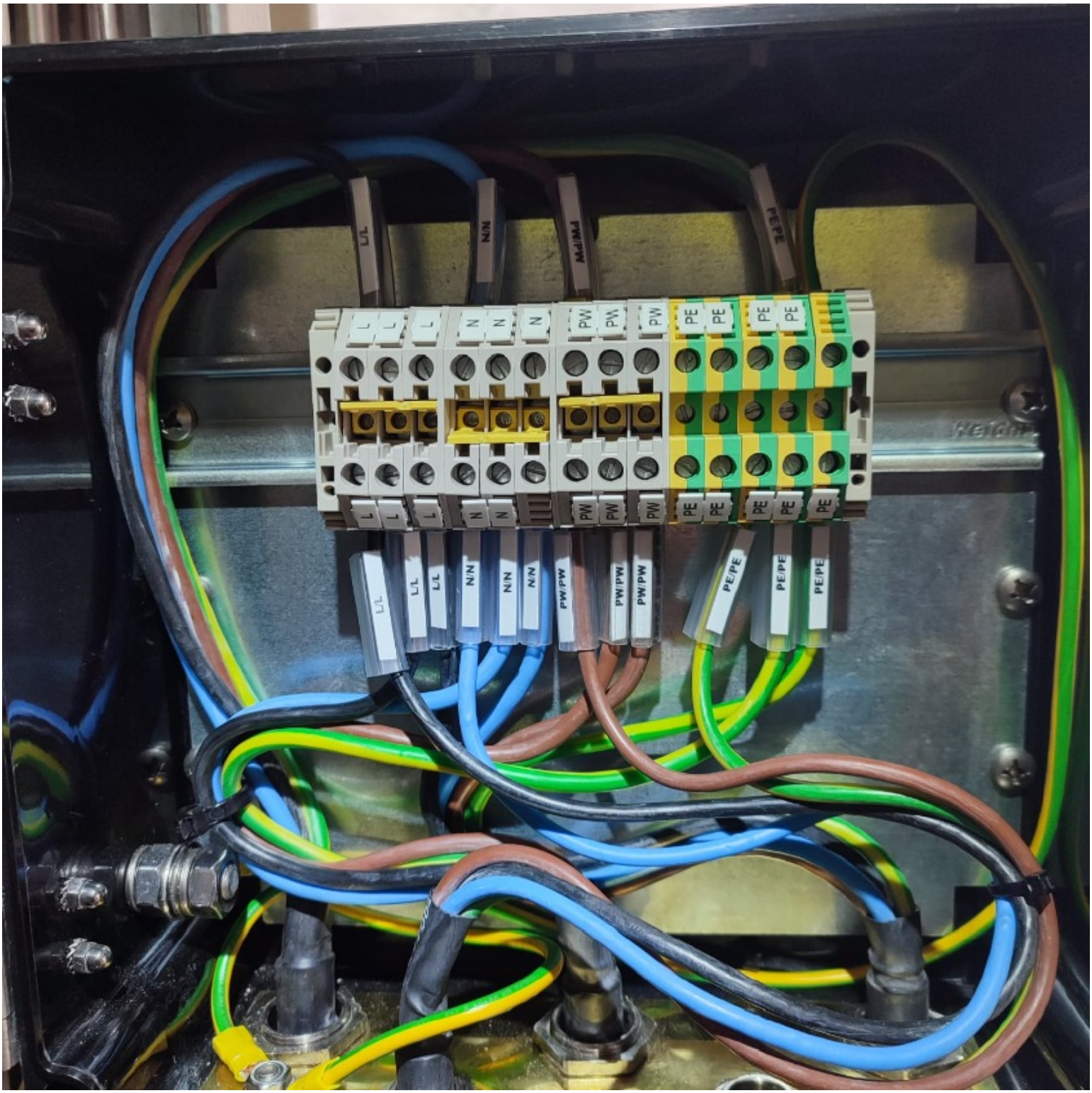
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L1
N/N
PW/PW
PE/PE
L
N
PW
PE
L1/L1
N/N
PW/PW
PW/PW
PE/PE
PE/PE
PE/PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002884

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000725	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-10	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tag both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002885

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000727	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-11		Emergency Lighting JB / Emergency Lighting JB
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Missing SS cable tag both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002886

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000729	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-12	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tag both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002887

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000723	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-09	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002888

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000745	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-20	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002889

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000743	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-19		Emergency Lighting JB / Emergency Lighting JB
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002890

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000741	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-18	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002891

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000739	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-17	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002892

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000735	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-15	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002900

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001647	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-16	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (N/PE) inside the (EJB-200N1-08-L1-16).

See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

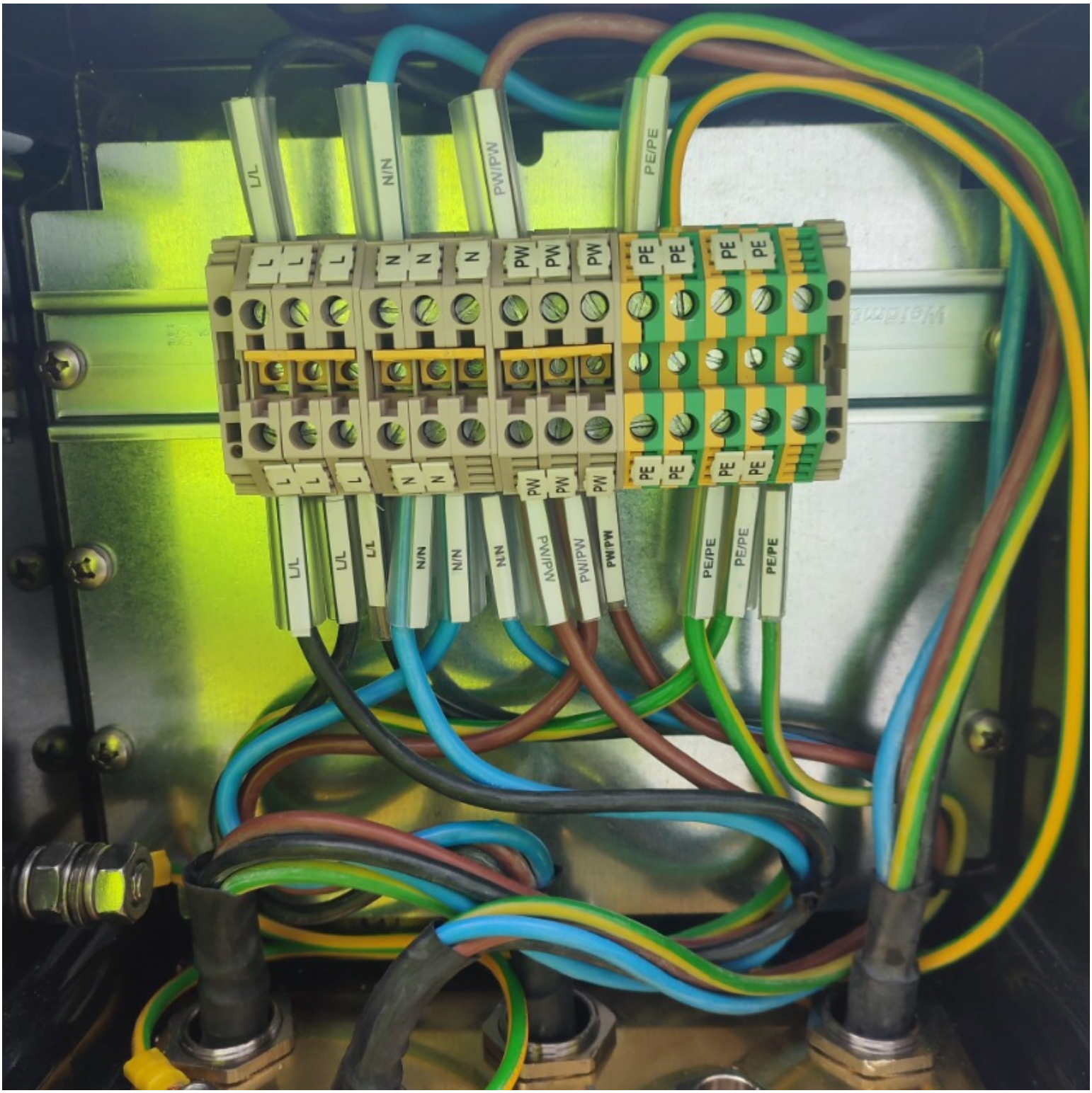
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L/L
N/N
PW/PW
PE/PE
L
N
PW
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002902

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001646	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-15	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (PE) inside the (EJB-200N1-08-L1-15).

See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-01-25

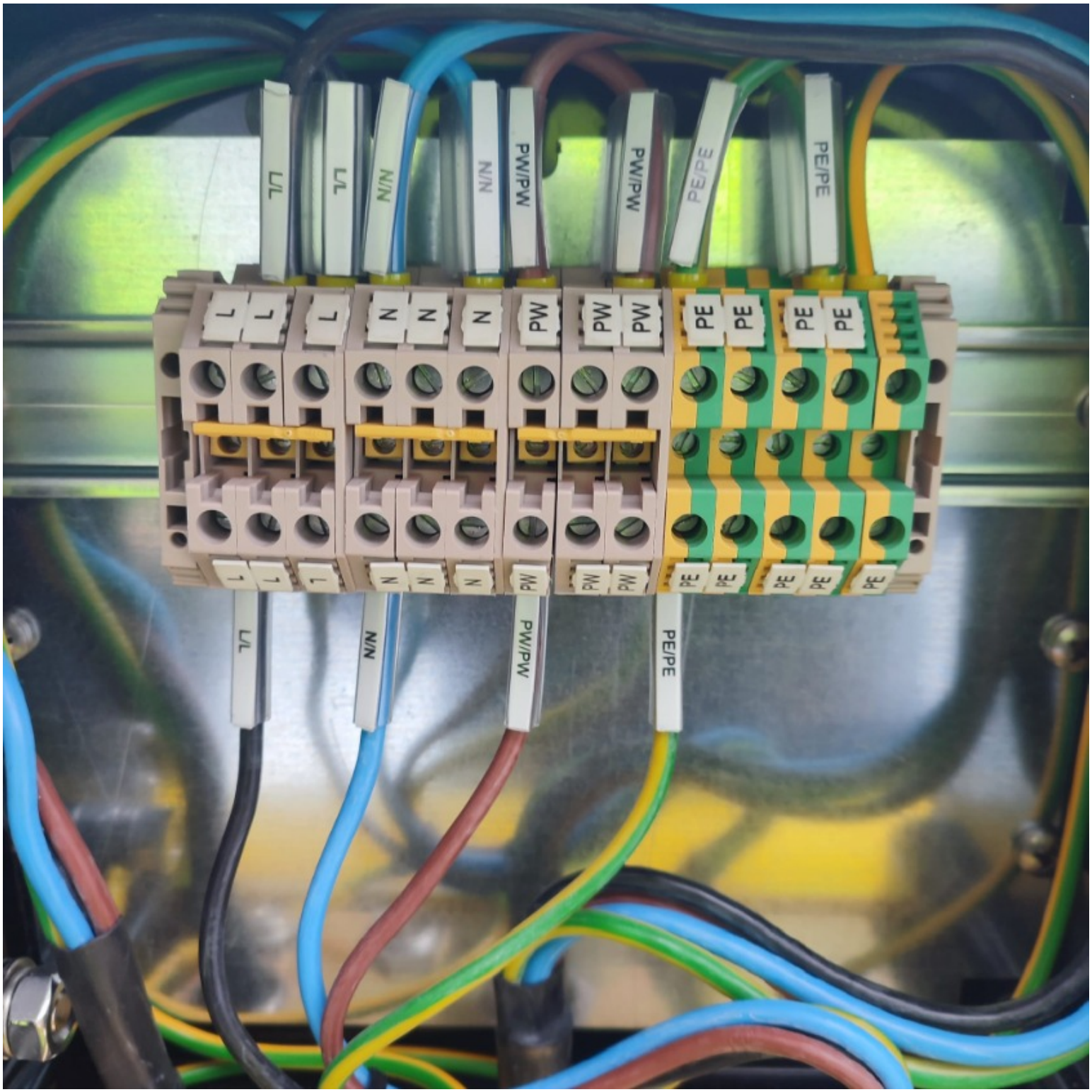
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L/L
L/L
N/N
N/N
PW/PW
PW/PW
PE/PE
PE/PE
L
N
PW
PE
L/L
N/N
PW/PW
PE/PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002908

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001646	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-15	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990070, but actual is 24P00297990019. See attached photo. .

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

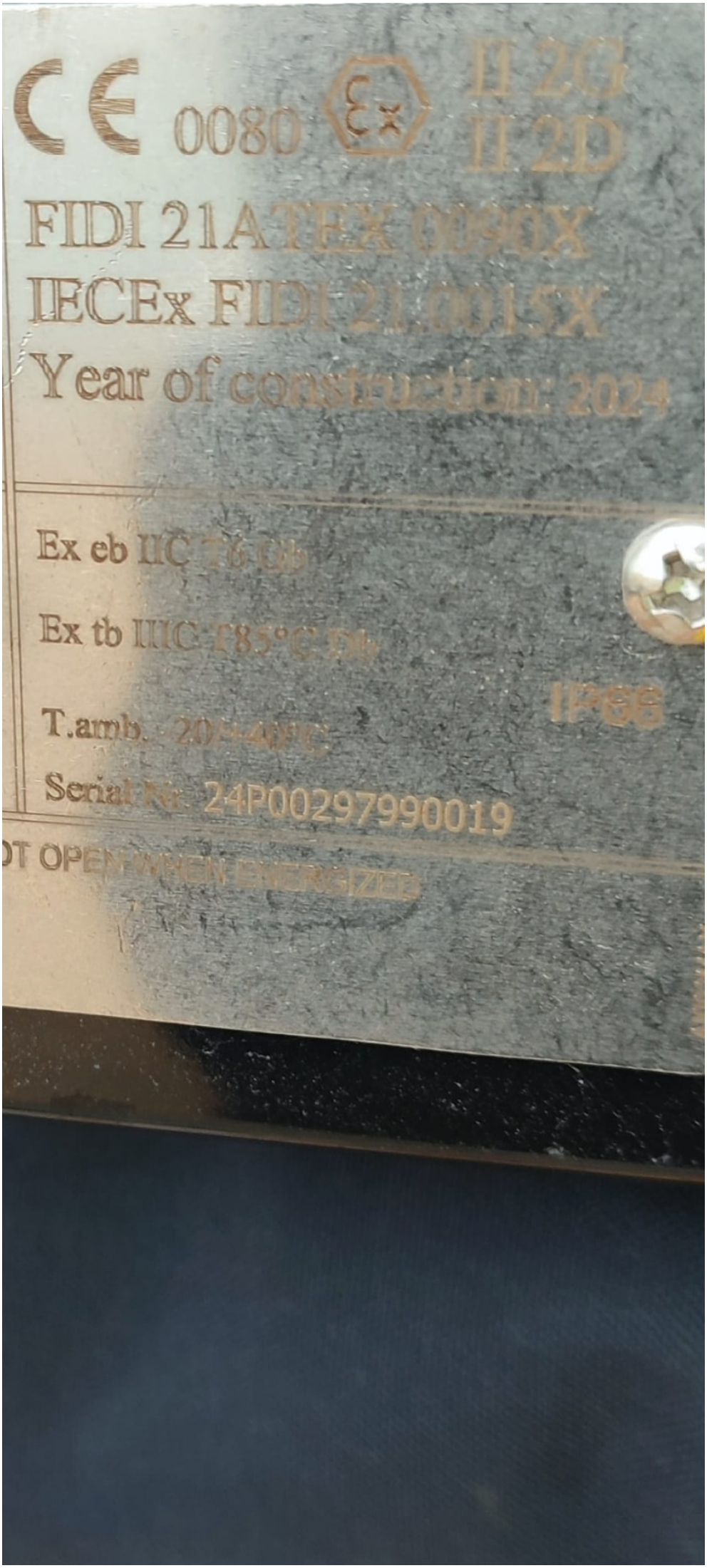
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


CE 0080
II 2G
II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. 20-40°C
Serial Nr. 24P00297990019
DT OPEN WHEN ENERGIZED


EJB-200N1-08-L1-15
CORTEC
Date installed 20/11/24
Replacement Date 20/11/25
TECHNOR ITALSMEA
MADE IN ITALY
IP68

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002909

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001677	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-01	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing the earth connection .The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud

Name: Alessio Polo
Date: 2025-01-16
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-20
Signature:

6- CLEARANCE APPROVAL

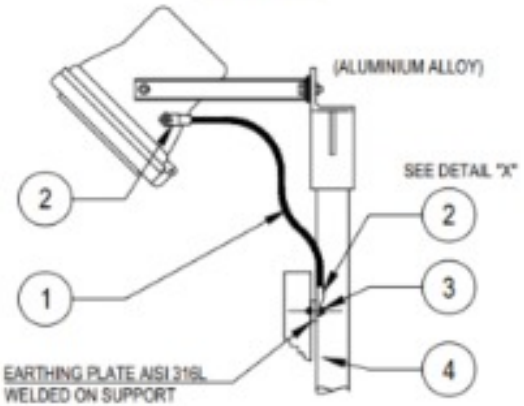
Name:
Date:
Signature:



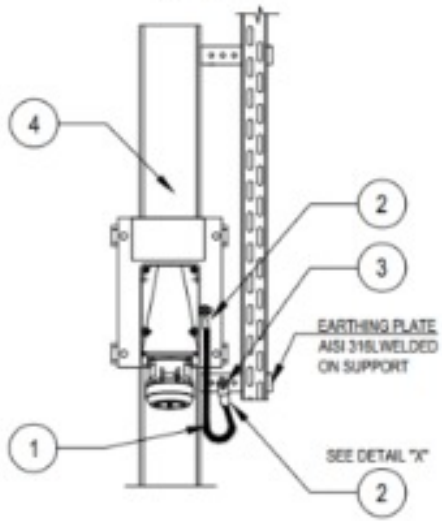
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	6mm²		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	6mm²	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

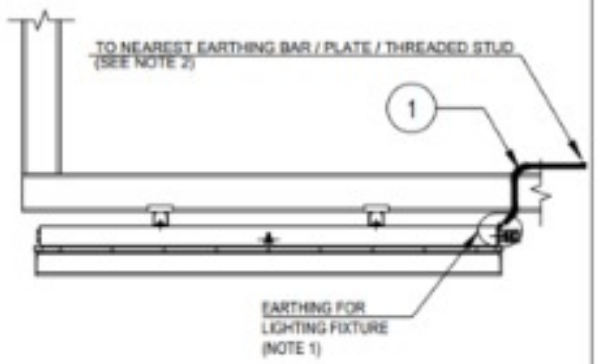
LIGHTING FIXTURE/GENERAL ITEM ON POLE



POWER SOCKET OUTLET

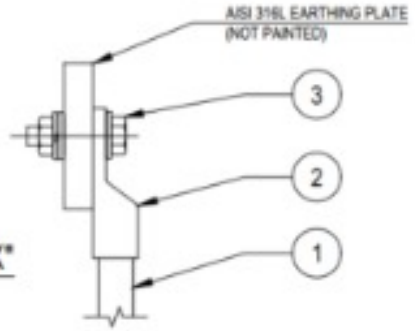


LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

DETAIL "X"



TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV. 2_I | DATE 07/11/24 | SIGNATURE G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

CROSSWIND

ROSETTI MARINO

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002910

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001677	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-01	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002911

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001271	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-14	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990071, but actual is 24P00297990017. See attached photo. .

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


TECHNOR
ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
MADE IN ITALY
CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
TYPE AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W
Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr. 24P00297990017
WARNINGS : DO NOT OPEN WHEN ENERGIZED
A002MAX


EJB-200N1-08-L1-14
CORTEC
Date Installed
Replacement Date

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002912

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001677	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-01	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another bracket needs to be added.

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002913

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001271	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-14	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (PW) inside the (EJB-200N1-08-L1-14). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-01-25

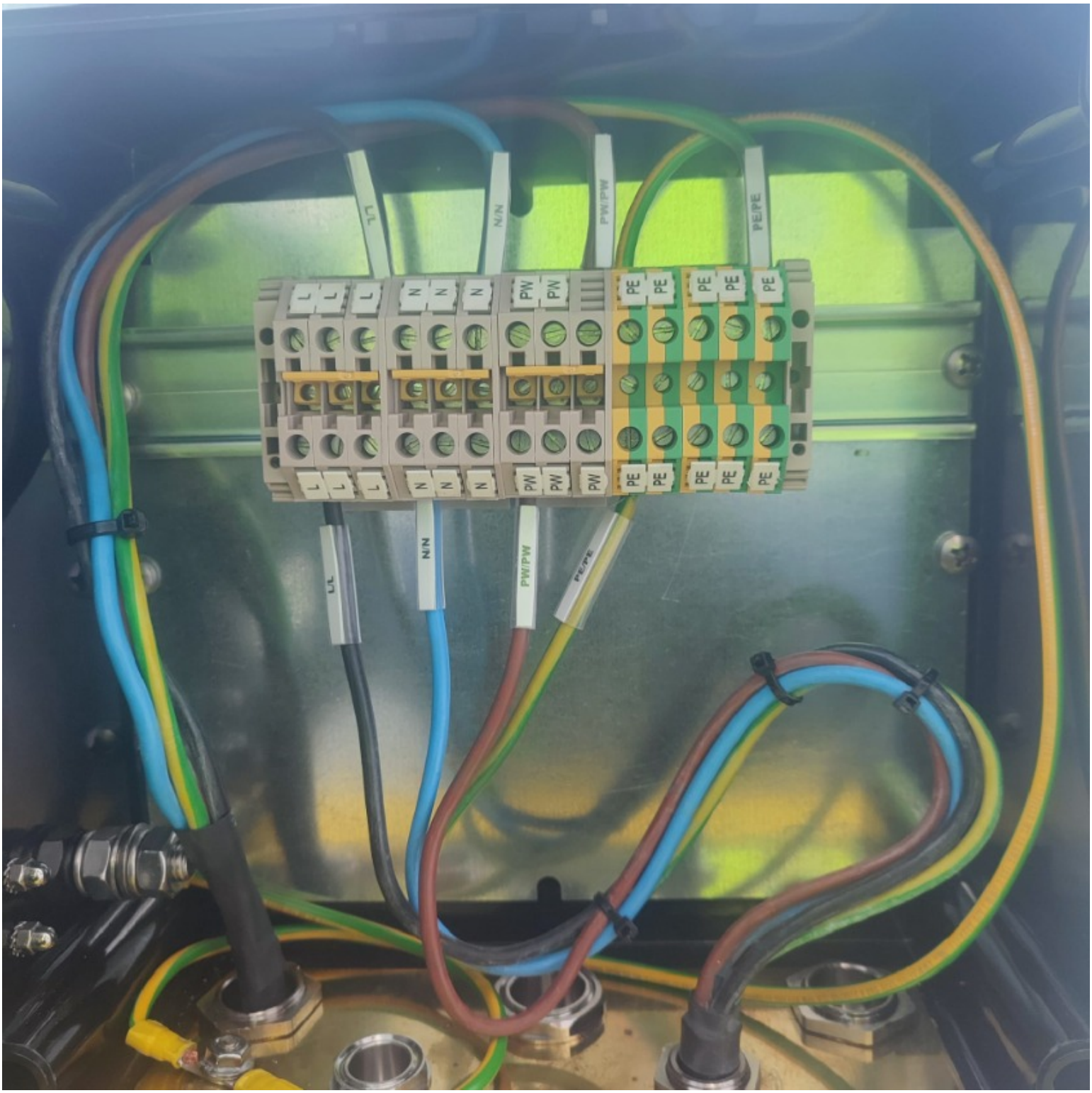
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L1
N/N
PW/PW
PE/PE
L
N
PW
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002914

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001677	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-01	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

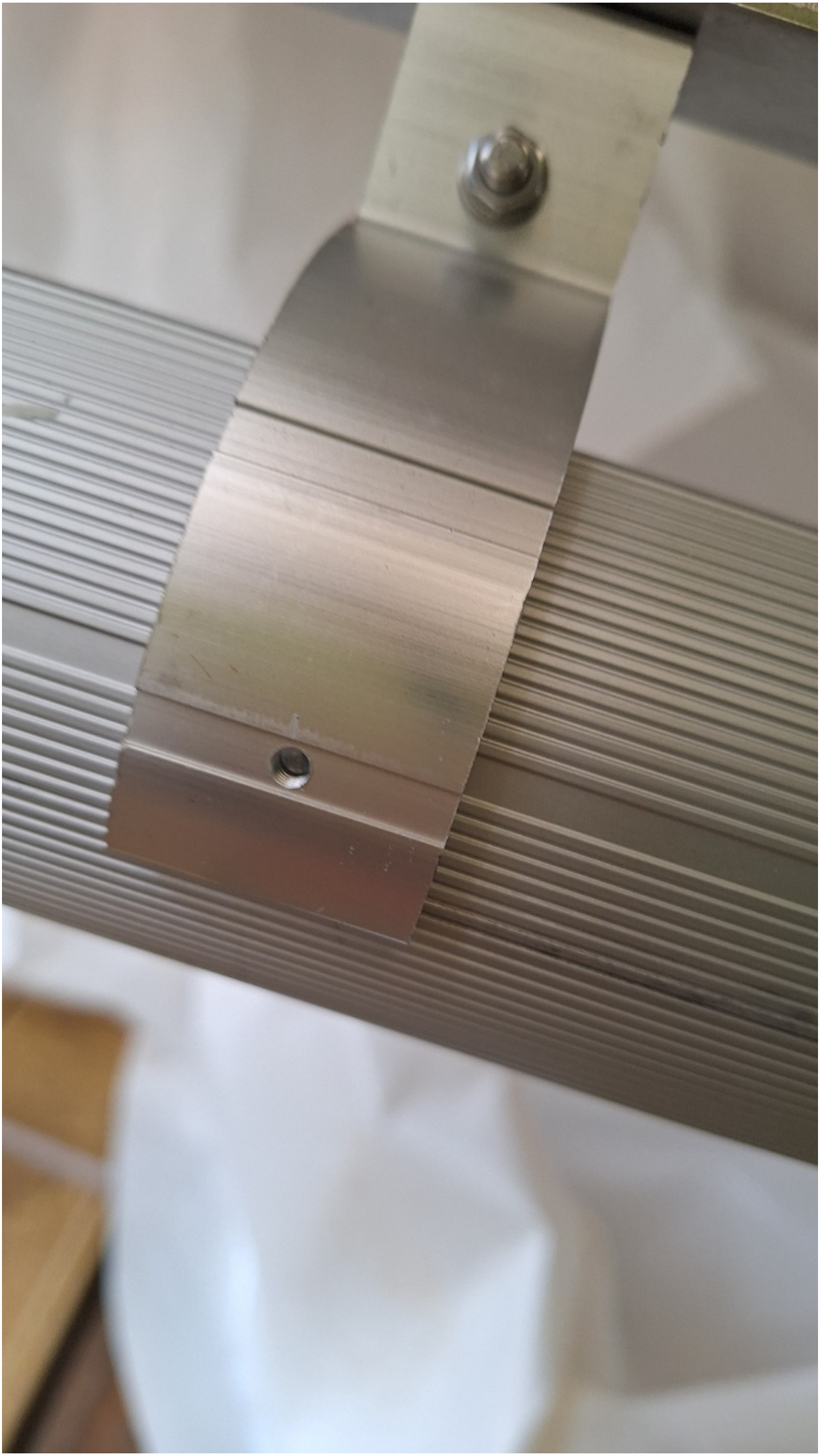
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002917

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001680	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-04	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002918

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001680	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-04	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

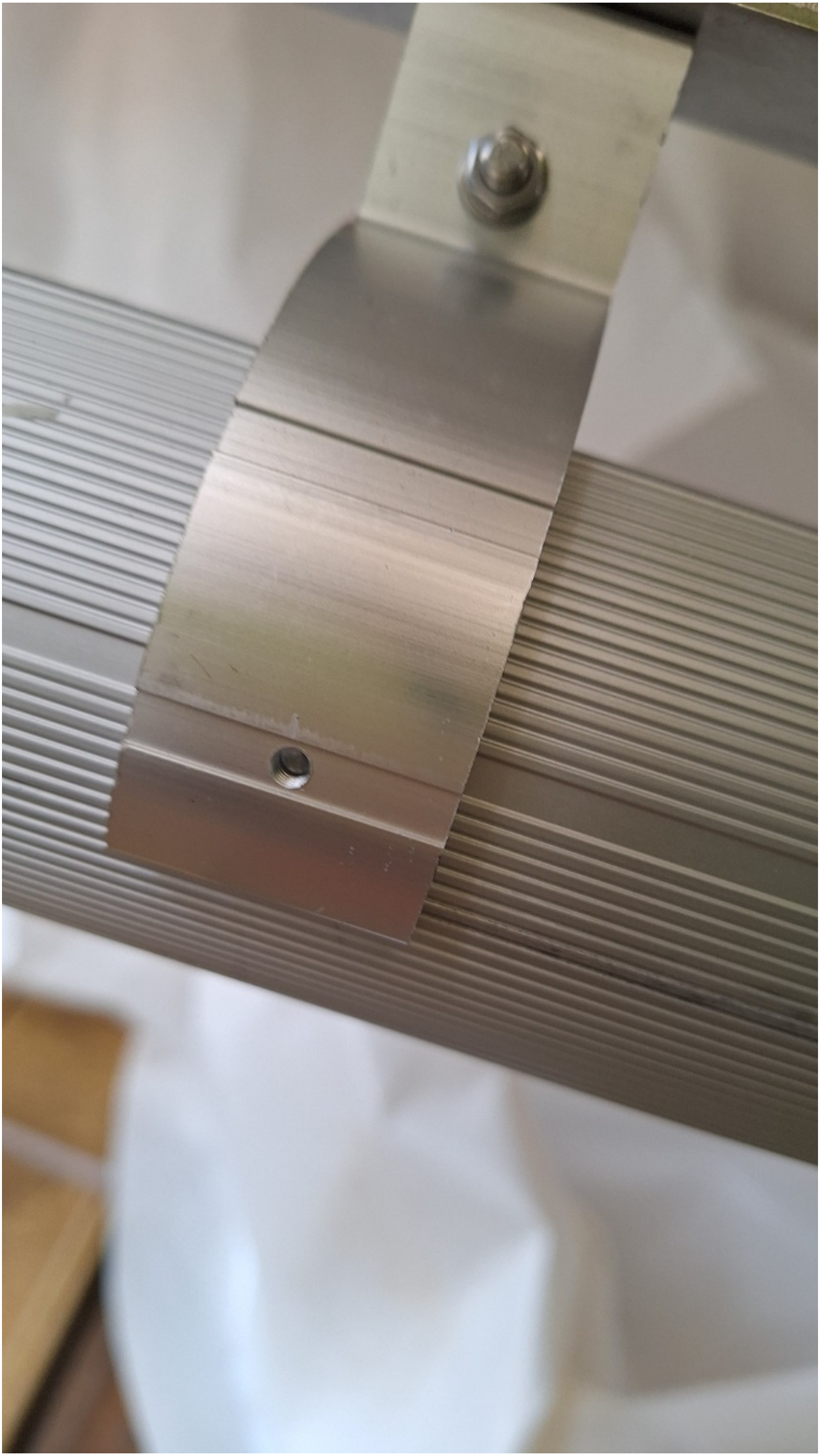
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002920

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001680	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-04	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another bracket needs to be added.

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002922

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001680	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-04	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing the earth connection. The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud

Name: Alessio Polo
Date: 2025-01-16
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-20
Signature:

6- CLEARANCE APPROVAL

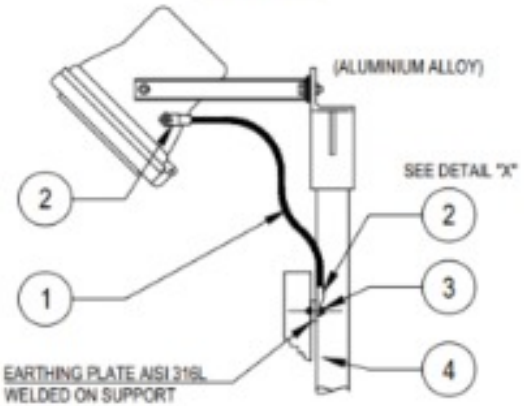
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Date:
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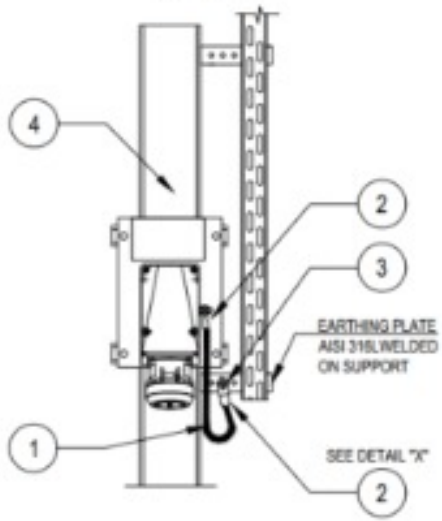
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	6mm²		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	6mm²	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

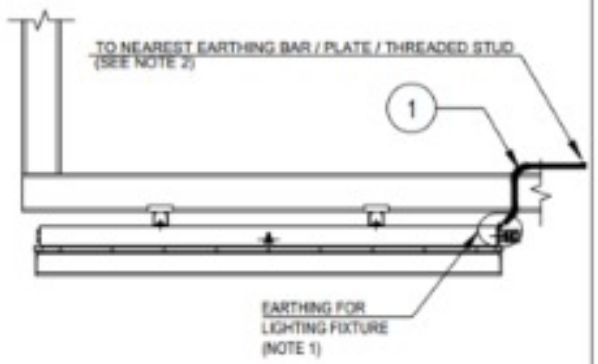
LIGHTING FIXTURE/GENERAL ITEM ON POLE



POWER SOCKET OUTLET

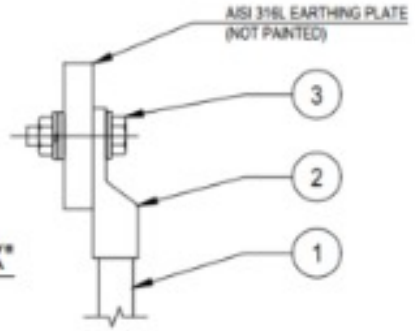


LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

DETAIL "X"



TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV. 2_I | DATE 07/11/24 | SIGNATURE G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

CROSSWIND

ROSETTI MARINO

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002923

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001681	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-05	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

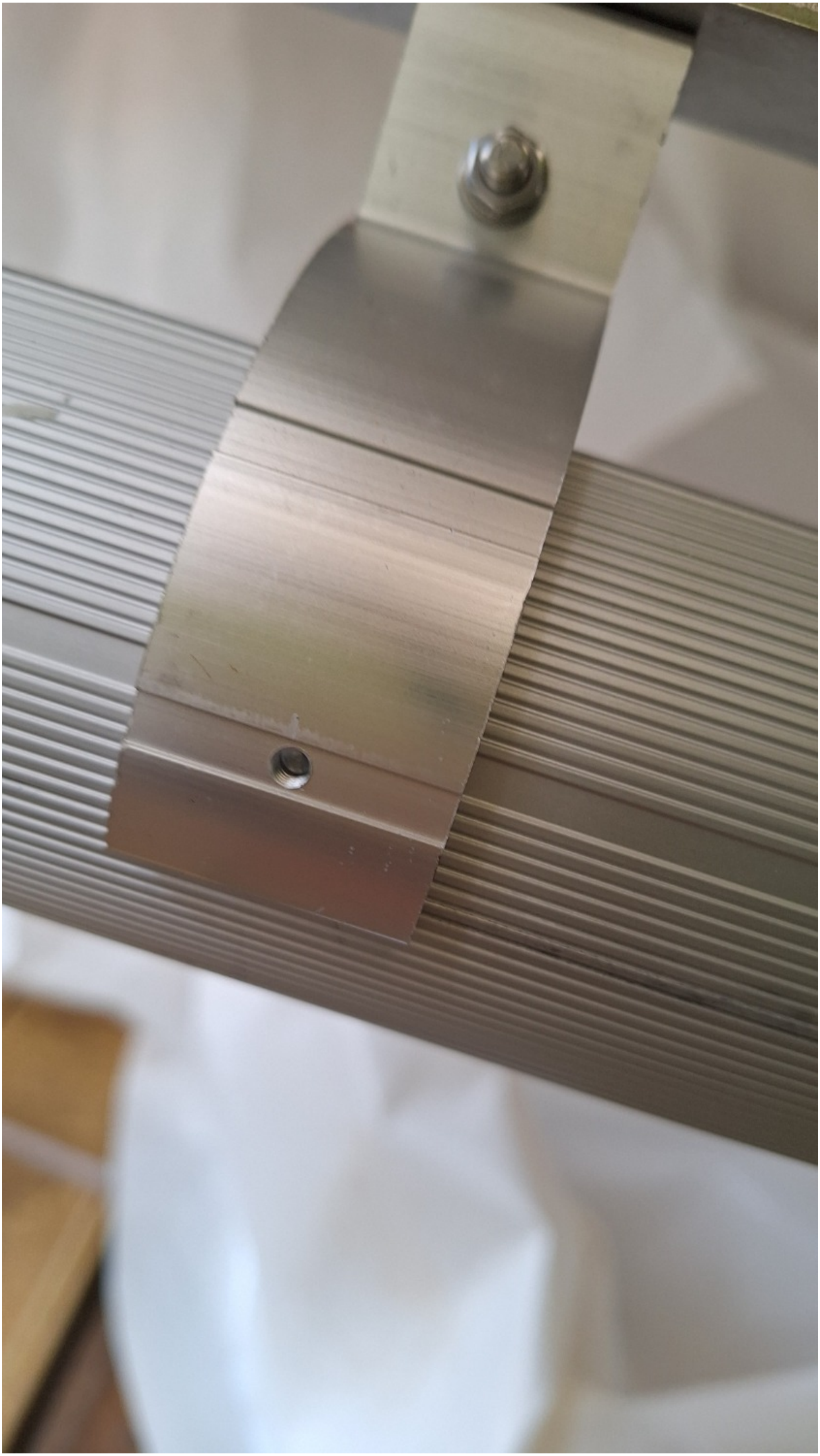
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002924

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001681	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-05	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another bracket needs to be added.

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


SAUBNE
Nitto
FRAM

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002929

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001679	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-03	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

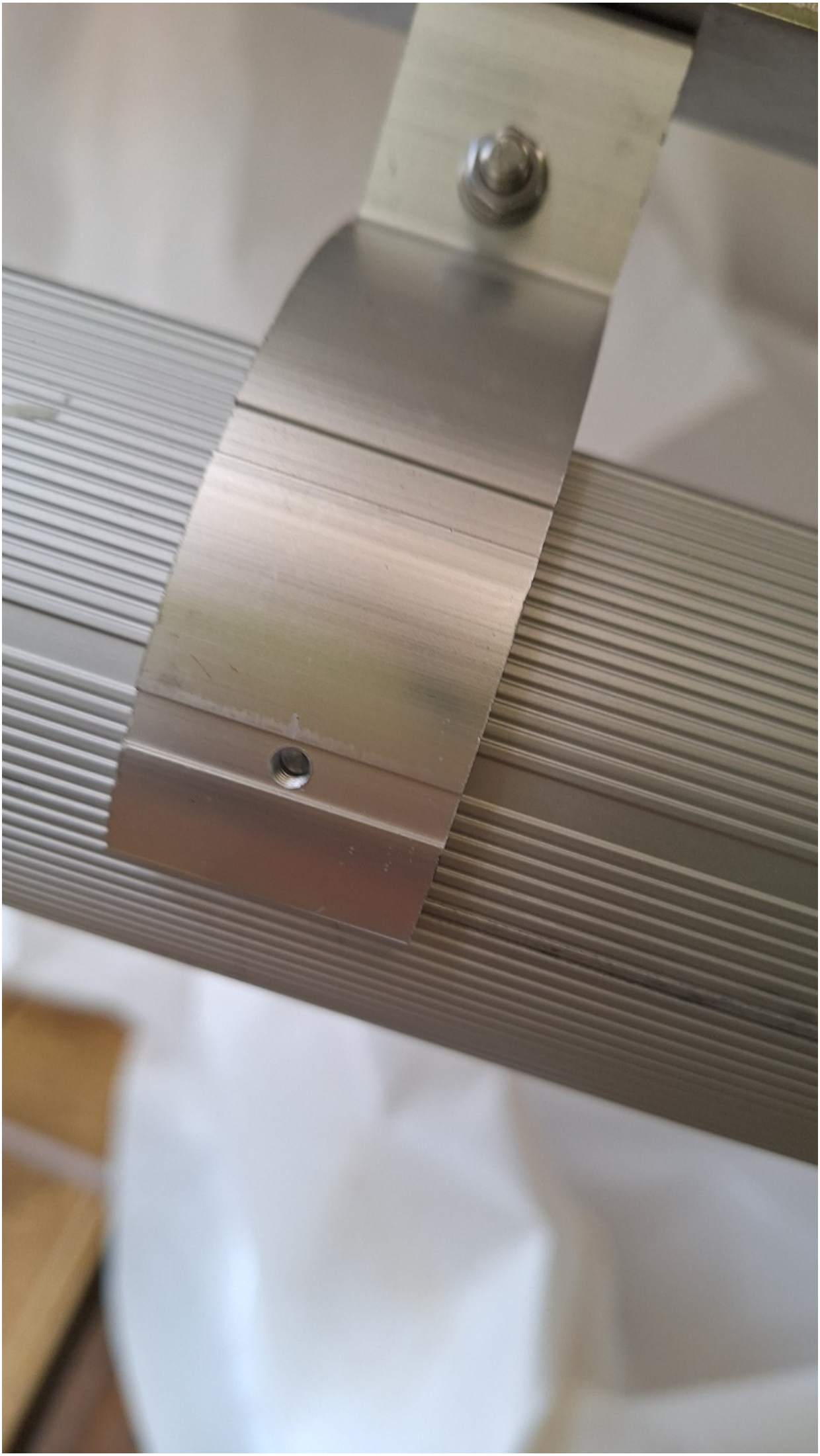
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6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002930

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001679	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-03	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002931

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001679	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-03	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another bracket needs to be added.

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002941

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001679	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-03	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing piece of black PVC between side caps and glass

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


Lifex

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002942

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001679	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-03	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing the earth connection. The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud

Name: Alessio Polo
Date: 2025-01-16
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-22
Signature:

6- CLEARANCE APPROVAL

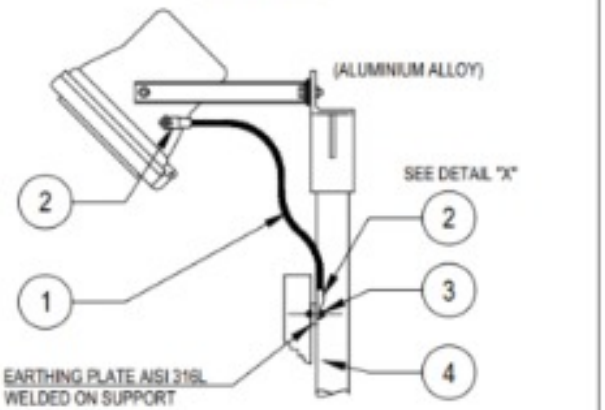
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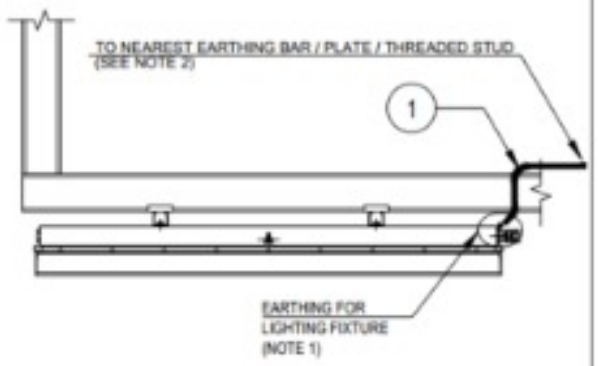
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	YIG INSULATING COPPER CONDUCTOR	COPPER	6mm²		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	6mm²	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

LIGHTING FIXTURE/GENERAL ITEM ON POLE

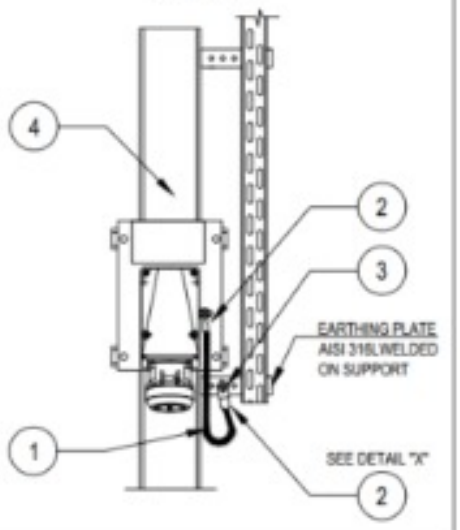


LIGHTING FIXTURES

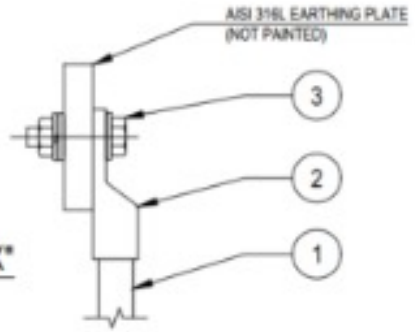


Refer also to TYP. "E32" (SEE SHEET 23)

POWER SOCKET OUTLET



DETAIL "X"



TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV. 2_I | DATE 07/11/24 | SIGNATURE G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

CROSSWIND

ROSETTI MARINO

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002943

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001683	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-07	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another bracket needs to be added

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


SAUBNE
Nitto
FRAM

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002944

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001683	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-07	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

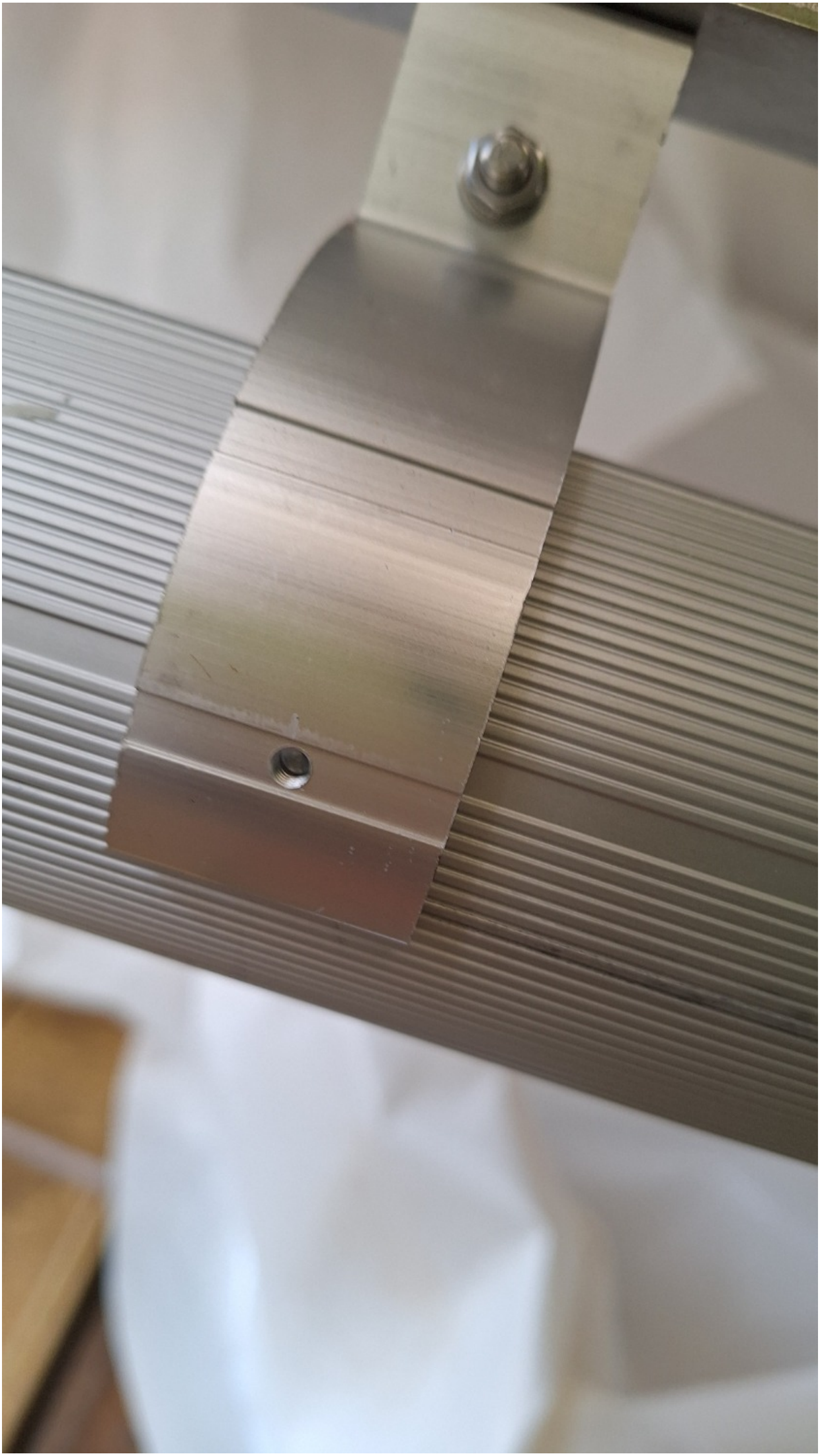
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6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002945

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001392	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-15	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002946

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001392	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-15	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing the earth connection . The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud

Name: Alessio Polo
Date: 2025-01-16
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-20
Signature:

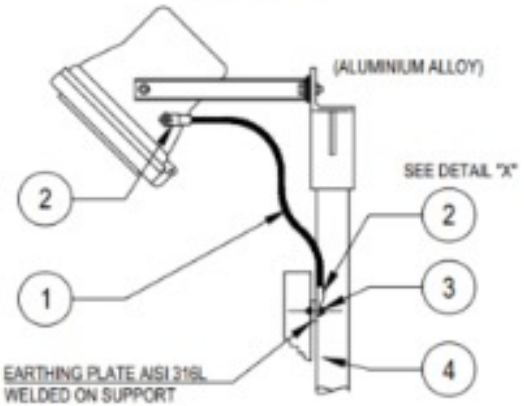
6- CLEARANCE APPROVAL

Name:
Date:
Signature:

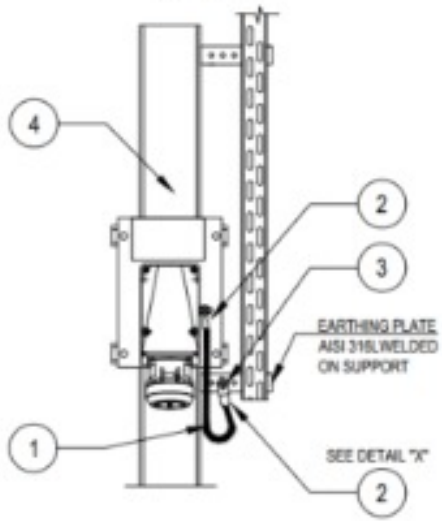
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	6mm²		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	6mm²	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

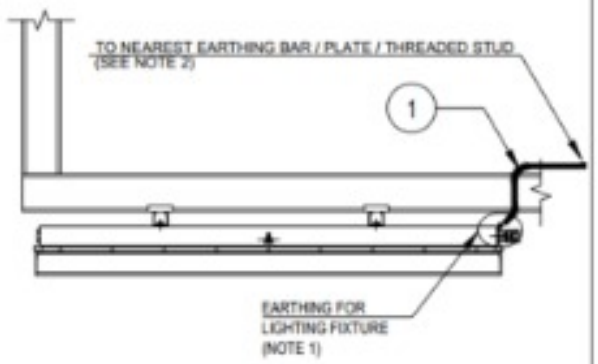
LIGHTING FIXTURE/GENERAL ITEM ON POLE



POWER SOCKET OUTLET

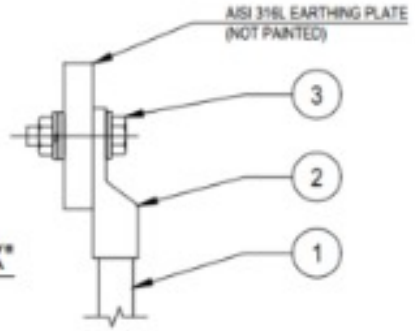


LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

DETAIL "X"



TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV. 2_I | DATE 07/11/24 | SIGNATURE G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

CROSSWIND

ROSETTI MARINO

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002947

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001685	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-09	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002948

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001685	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-09	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

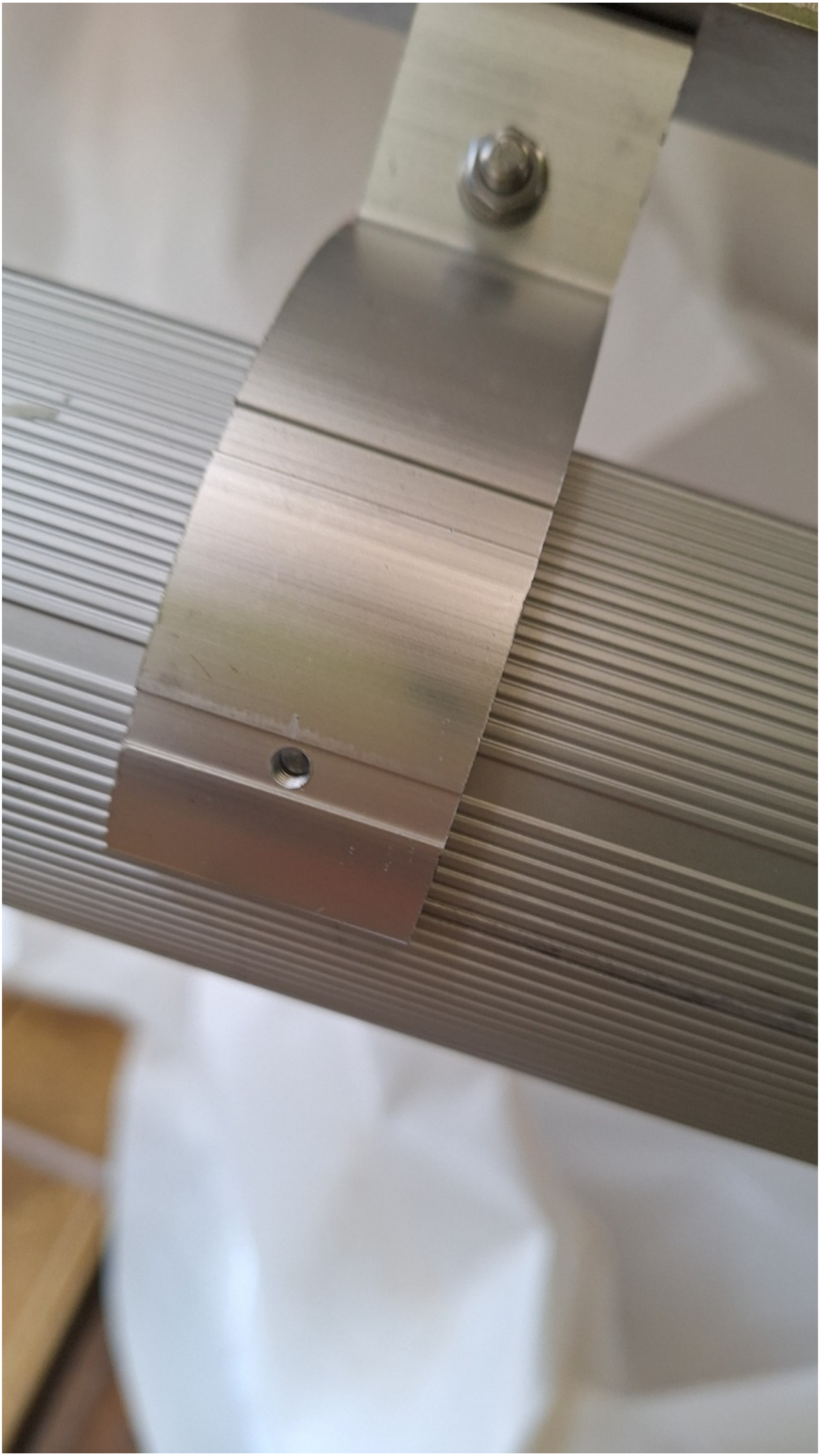
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002949

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001685	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-09	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud

Name: Alessio Polo
Date: 2025-01-16
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-01-23
Signature:

6- CLEARANCE APPROVAL

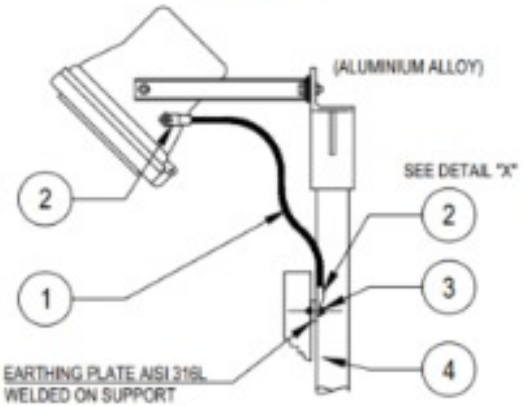
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Date:
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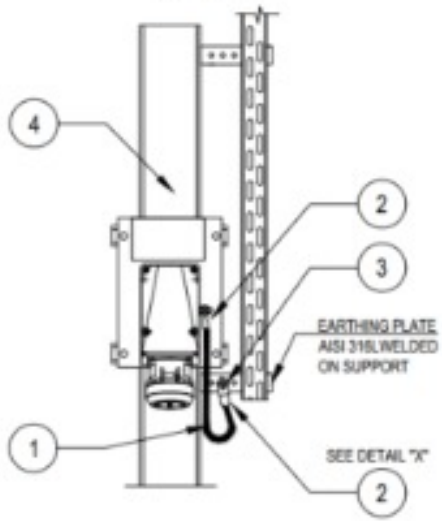
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	6mm²		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	6mm²	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

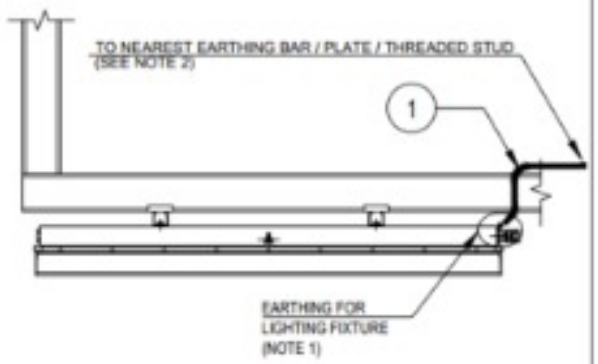
LIGHTING FIXTURE/GENERAL ITEM ON POLE



POWER SOCKET OUTLET

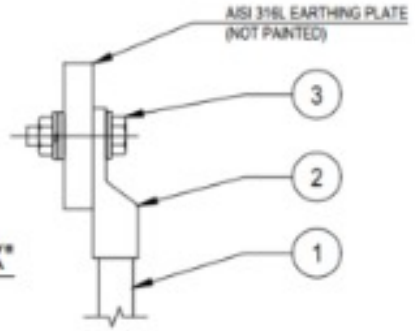


LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

DETAIL "X"



TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV. 2_I | DATE 07/11/24 | SIGNATURE G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

CROSSWIND

ROSETTI MARINO

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002950

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001685	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-09	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing the earth connection inside the lamp between the cover and the lamp.

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-23

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002951

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001684	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-08	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

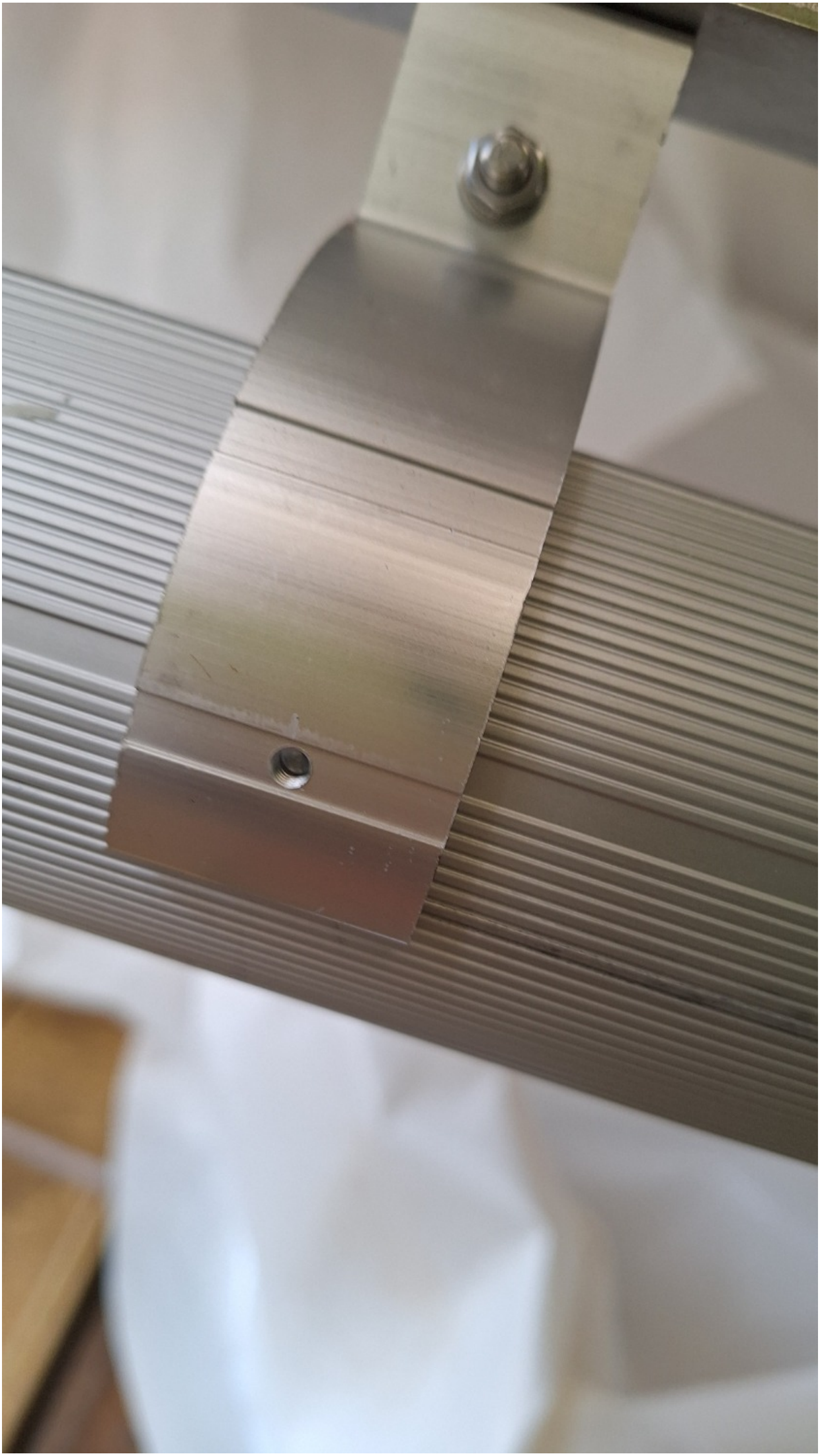
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002952

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001684	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-08	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The earthing cable of the lamp must be connected to the nearest earthing bar / plate / threaded stud

Name: Alessio Polo
Date: 2025-01-16
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-01-23
Signature:

6- CLEARANCE APPROVAL

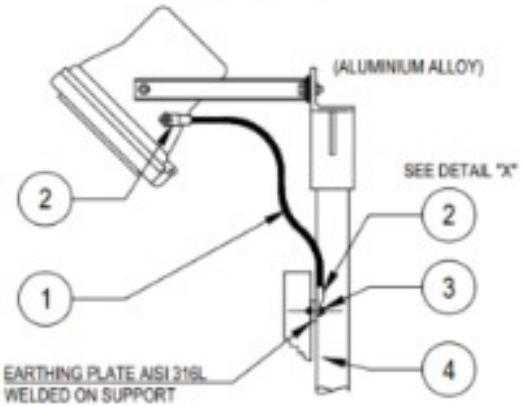
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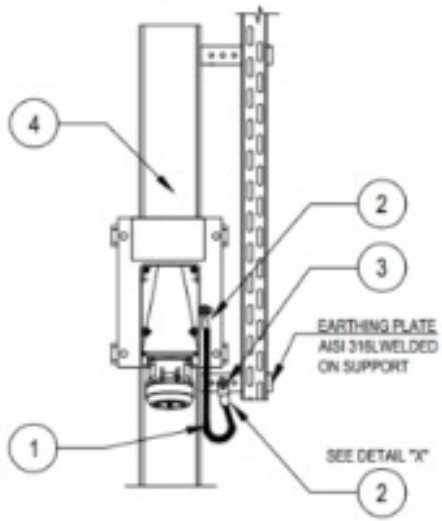
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	6mm²		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	6mm²	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

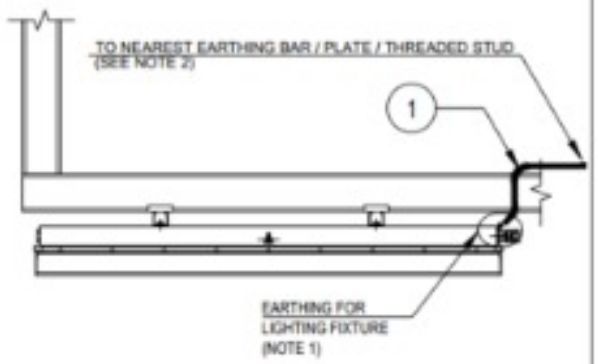
LIGHTING FIXTURE/GENERAL ITEM ON POLE



POWER SOCKET OUTLET

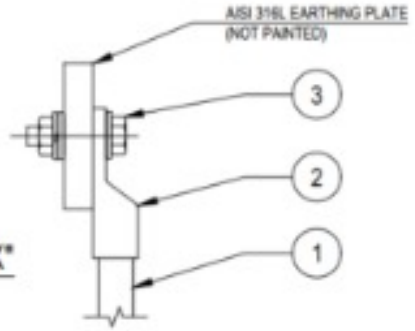


LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

DETAIL "X"



TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV. 2_I | DATE 07/11/24 | SIGNATURE G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

CROSSWIND

ROSETTI MARINO

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002953

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001392	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-15	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing the earth connection inside the lamp between the cover and the lamp.

Name: Alessio Polo

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-22

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002958

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001651	1.4 Discipline	Electrical
1.2 Item	EJB-200N1-08-L1-20	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (PW/PE) inside the (EJB-200N1-08-L1-20). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

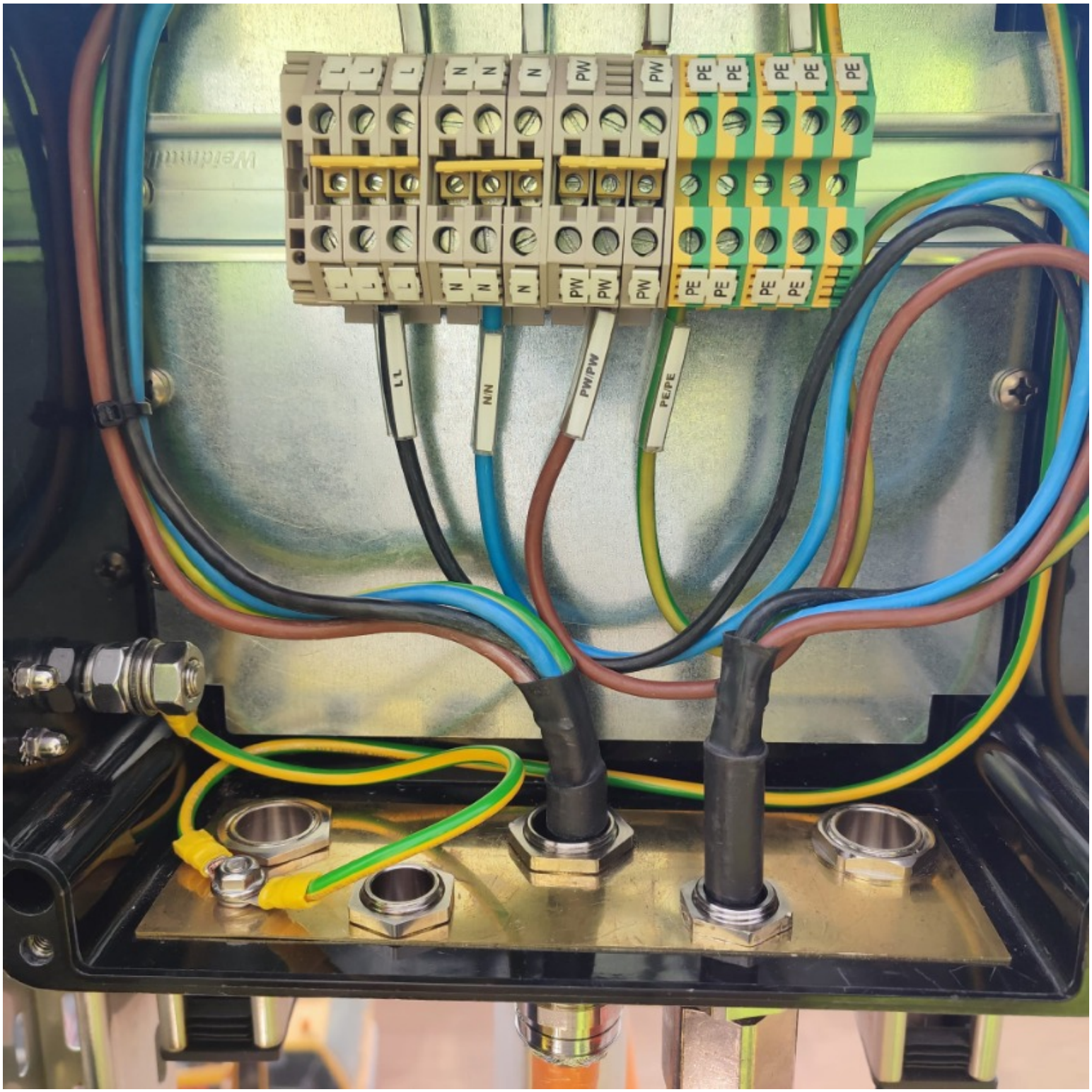
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L
N
PW
PE
L1
N/N
PW/PW
PE/PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002959

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001651	1.4 Discipline	Electrical
1.2 Item	EJB-200N1-08-L1-20		JB - EMERGENCY LIGHTING
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the plugs. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-21

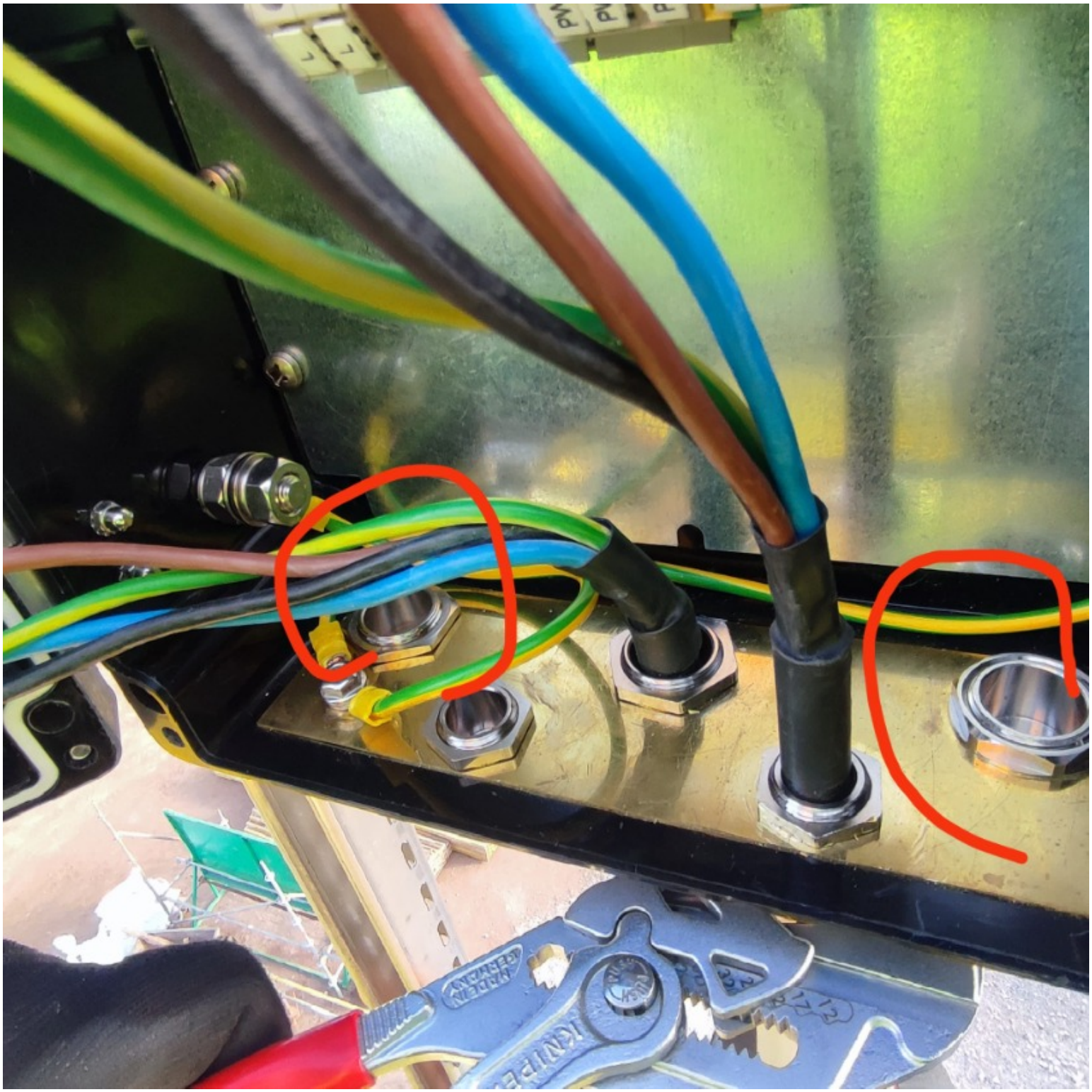
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002960

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001648	1.4 Discipline	Electrical
1.2 Item	EJB-200N1-08-L1-17	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the plug. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-01-25

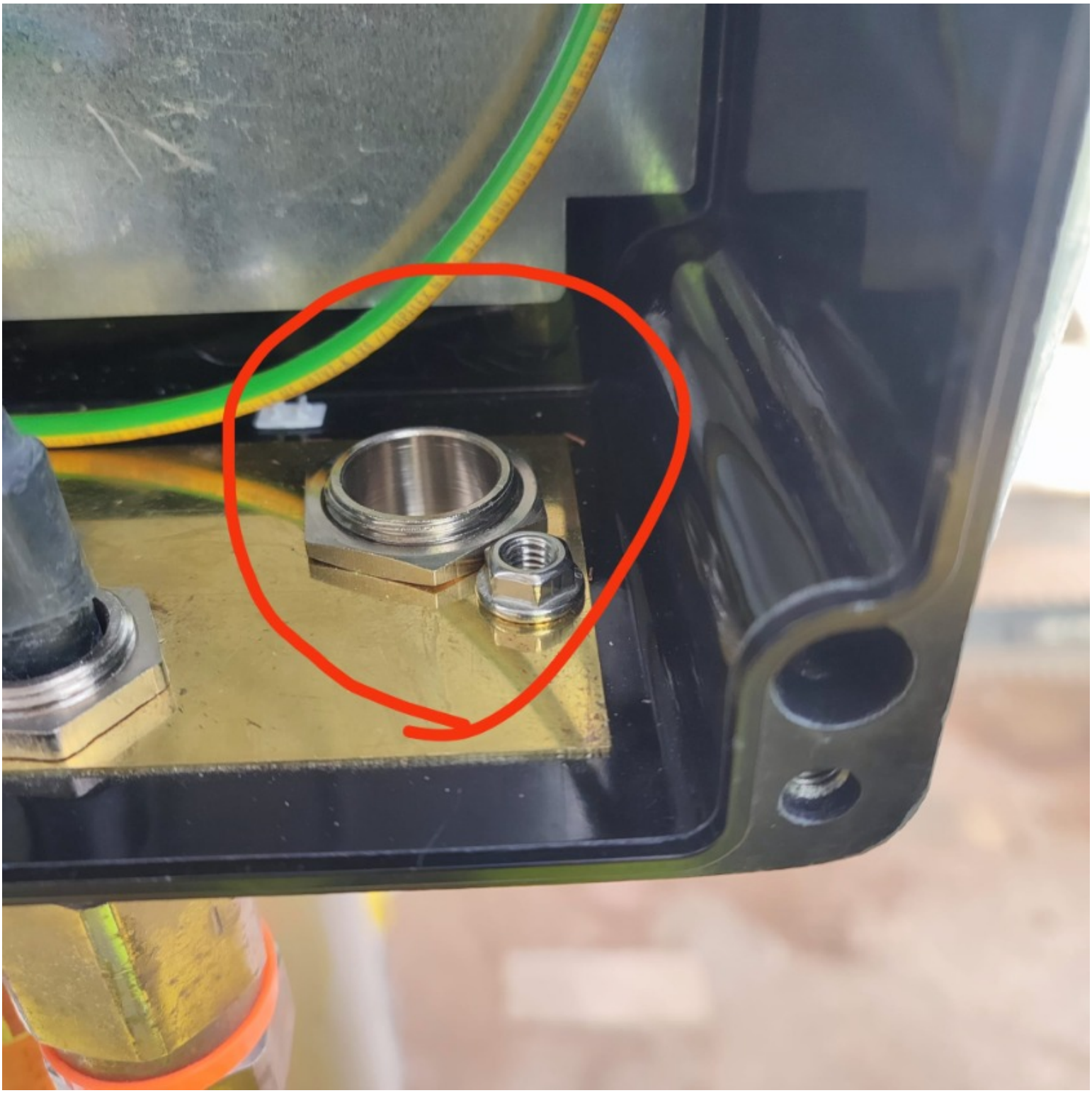
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002961

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001648	1.4 Discipline	Electrical
1.2 Item	EJB-200N1-08-L1-17	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip N/(PW/PE) inside the (EJB-200N1-08-L1-17). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-01-25

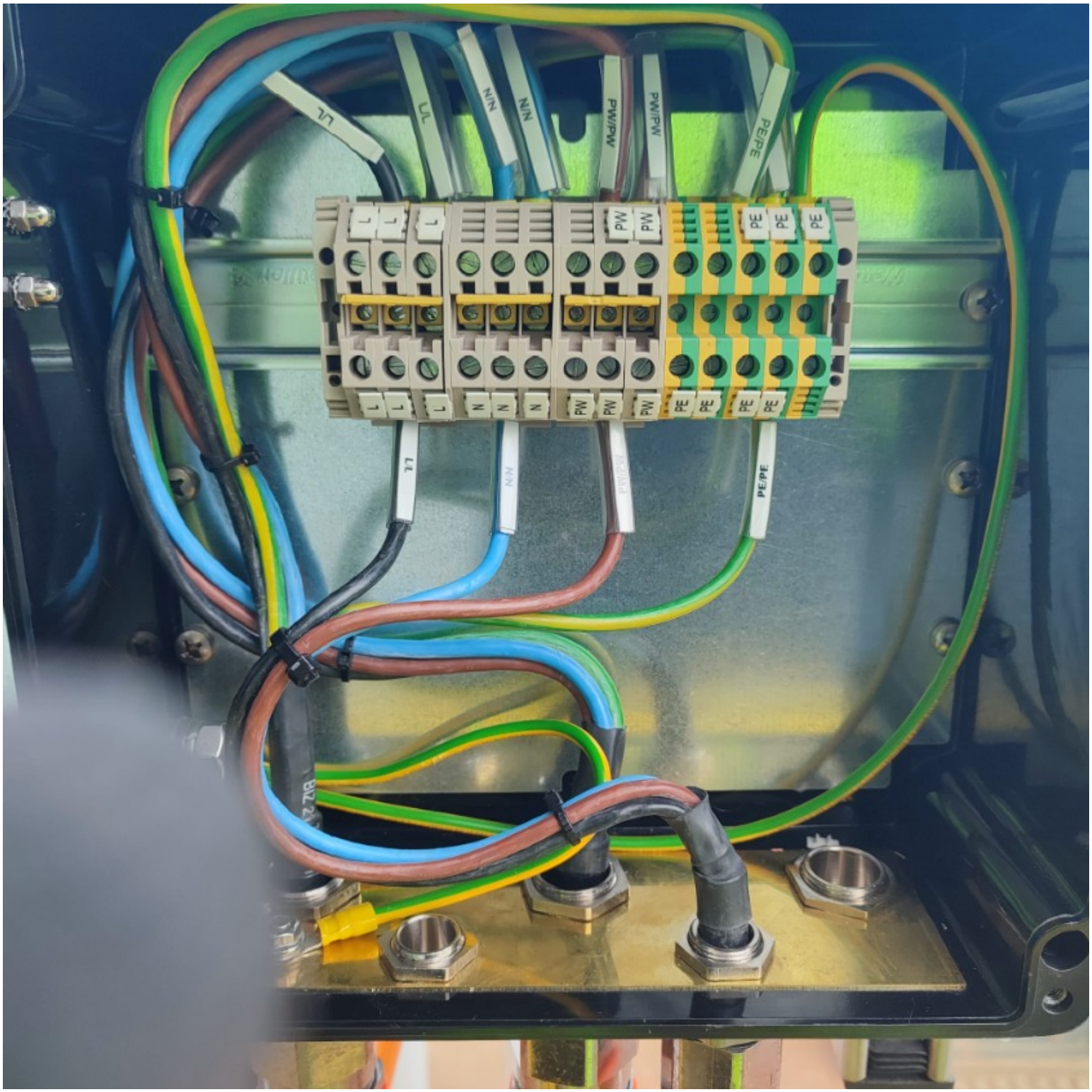
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L1
L1
N/N
N/N
PW/PW
PW/PW
PE/PE
L
N
PW
PE
L1
N/N
PW/PW
PE/PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002266

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001690	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-14	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

trafolite tag is missing

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002268

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001690	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-14	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing all lock nuts for stopped the lamp

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002269

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001690	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-14	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another support needs to be added

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002271

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000734	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-16	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body. on JB side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002272

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000734	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-16		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

wrong SS cable tag on JB side, missing SS cable tag on light side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002273

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001393	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-16	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing plug on pole support of light

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Gabriele Bertuccelli

Date: 2025-01-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002274

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001393	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-16	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another support needs to be added

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002275

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001393	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-16	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing all lock nuts for stopped the lamp

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002276

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001393	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-16	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Trafolite tag is missing

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002290

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000740	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-19		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body. on JB side

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002291

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000740	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-19		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on light side

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002293

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001693	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-19	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. Another support needs to be added

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002294

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001693	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-19	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing all lock nuts for stopped the lamp

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002295

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001693	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-19	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Trafolite tag is missing

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002296

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000728	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-13		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on light side

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002297

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000728	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-13	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body. on JB side

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

replaced

Name: Eleonora Carotenuto

Date: 2025-01-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002298

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001689	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-13	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Trafolite tag is missing

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002299

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001689	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-13	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing all lock nuts for stopped the lamp

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002300

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001689	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-13	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another support needs to be added

Name: Andrea Andreani

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002301

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001689	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-13	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing screw between enclosure and din rail, also missing the earthing continuity wire

Name: Andrea Andreani
Date: 2025-01-02
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-22
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002786

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000706	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-02	Emergency Lighting Fixture / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near ELF-200N1-08-L1-01 / ELF-200N1-08-L1-02

Name: Alessio Polo
Date: 2025-01-14
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-24
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002789

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000710	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-03	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near ELF-200N1-08-L1-03 / EJBF-200N1-08-L1-07

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002790

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000711	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-04	Emergency Lighting Fixture / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near ELF-200N1-08-L1-04 / EJB-200N1-08-L1-05

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002792

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000713	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-05	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near ELF-200N1-08-L1-05 / EJB-200N1-08-L1-05

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


P-ELF-200N1-08-L1-05


P-ELF-200N1-08-L1-05
P-ELF-200N1-08-L1-04

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002794

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000713	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-05		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of condensation or water due to atmospheric causes will drains downwards).

Name: Alessio Polo
Date: 2025-01-14
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-01-31
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002801

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000713	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-05		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

The cable is not support .

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-31

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002802

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000717	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-07	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near ELF-200N1-08-L1-07 / EJB-200N1-08-L1-07

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002804

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000717	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-07		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of condensation or water due to atmospheric causes will drains downwards).

Name: Alessio Polo
Date: 2025-01-14
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-01-31
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002805

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000717	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-07		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

The cable is not support .

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-31

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002815

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001678	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-02	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002816

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001678	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-02	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another bracket needs to be added.

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002820

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001678	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-02	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing the earth connection of the lamp and plate block/fixing

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Gabriele Bertuccelli

Date: 2025-01-22

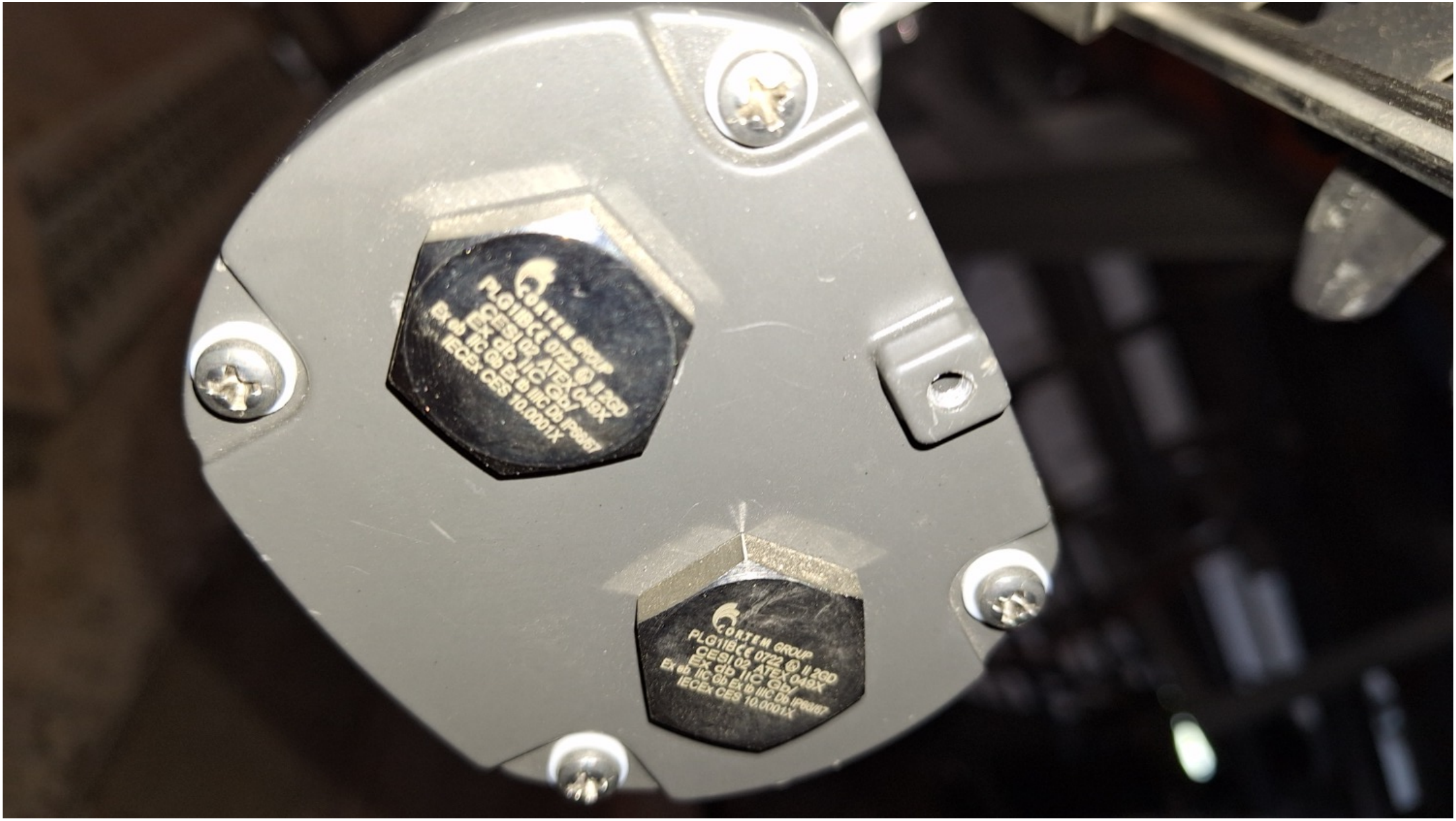
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


CORTEM GROUP
PLG11BCE 0722 II 2GD
CESI 02 ATEX 046X
Ex db IIC Gb/
Ex db IIC Gb Ex tb IIIC Db IP66/67
IECEx CES 10.0001X
CORTEM GROUP
PLG11BCE 0722 II 2GD
CESI 02 ATEX 046X
Ex db IIC Gb/
Ex db IIC Gb Ex tb IIIC Db IP66/67
IECEx CES 10.0001X

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002823

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001678	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-02	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing piece of black PVC between side caps and glass

Name: Alessio Polo

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002856

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000705	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-01	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near EJB-200N1-08-L1-01 / ELF-200N1-08-L1-01

Name: Alessio Polo
Date: 2025-01-15
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-01-30
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002857

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000715	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-06	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near EJB-200N1-08-L1-06 / ELF-200N1-08-L1-06

Name: Alessio Polo
Date: 2025-01-15
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-24
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002858

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000719	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-08	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near EJB-200N1-08-L1-09 / ELF-200N1-08-L1-08

Name: Alessio Polo

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002859

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000719	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-08		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of condensation or water due to atmospheric causes will drains downwards).

Name: Alessio Polo
Date: 2025-01-15
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-31
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002860

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000720	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-09	Emergency Lighting Fixture / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near EJB-200N1-08-L1-08 / ELF-200N1-08-L1-09

Name: Alessio Polo

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002861

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000720	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-09	Emergency Lighting Fixture / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of condensation or water due to atmospheric causes will drains downwards).

Name: Alessio Polo
Date: 2025-01-15
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-31
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002862

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000732	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-15	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing cable tag SS , near ELF-200N1-08-L1-23 / ELF-200N1-08-L1-15

Name: Alessio Polo

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002863

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000715	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-06		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Cable routing to the item/equipment shall be done in order to prevent drop-off (cable shall route lower than cable gland so that any drop of condensation or water due to atmospheric causes will drains downwards).

Name: Alessio Polo
Date: 2025-01-15
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-31
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002864

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000715	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-06		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

The cable is not support .

Name: Alessio Polo

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-31

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002866

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001682	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-06	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing the earth connection of the lamp .

Name: Alessio Polo
Date: 2025-01-15
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-01-22
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002867

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001682	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-06	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another bracket needs to be added.

Name: Alessio Polo

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002874

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001682	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-06	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002876

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001678	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-02	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing all Lock Pin for stopped the lamp

Name: Alessio Polo

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002878

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001647	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-16	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990069, but actual is 24P00297990018. See attached photo. .

Name: Giovanni Tangianu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


TECHNOR
ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
CE 0080
II 2G
II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
MADE IN ITALY
TYPE: AQ-2S2612P
230VAC 50Hz 20A
Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
T.amb. -20/+40°C
Serial Nr. 24P002979900
WARNINGS : DO NOT OPEN WHEN ENERGIZED


EJB-200N1-08-L1-16
PEEL HERE
CORTEC
CORPORATION
MADE IN ITALY
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002883

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000733	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-14	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tag both side

Name: Paolo Schintu

Date: 2025-01-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001660

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000707	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-04	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Core tag is missing for cable on on both panel and JB side

Name: Andrea Andreani

Date: 2024-12-11

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-11
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001661

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000707	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-04	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing cable labelling on both JB and panel side

Name: Andrea Andreani

Date: 2024-12-11

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-11
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed

Name: Eleonora Carotenuto

Date: 2025-06-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002231

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000746	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-22		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

wrong SS cable tag on JB side, missing SS cable tag on light side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002232

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000746	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-22		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body.

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

replaced

Name: Eleonora Carotenuto

Date: 2025-01-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002233

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000746	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-22		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

outer sheath of cable is damaged on cable gland on JB side, cable gland to be redone, see attached foto

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Cable is done.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002234

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001696	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-22	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

trafolite tag is wrong, report tag on another normal light

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002235

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001696	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-22	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing all lock nuts for stopped the lamp

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002236

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001696	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-22	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. Another support needs to be added

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002237

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000744	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-21		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

armour inside cable gland light side is oxidized

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-01-22

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002238

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000744	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-21	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body. on JB side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-01-22

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002239

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000744	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-21		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on light side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002240

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001695	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-21	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. Another support needs to be added

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002241

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001695	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-21	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing all lock nuts for stopped the lamp

Name: Andrea Andreani
Date: 2024-12-31
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi
Date: 2025-01-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002242

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001695	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-21	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing trafolite tag

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002243

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001694	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-20	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing black plastic piece between coverand glass of the light

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

.

Name: Luca Mussi

Date: 2025-01-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002244

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001694	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-20	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing all lock nuts for stopped the lamp

Name: Andrea Andreani
Date: 2024-12-31
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi
Date: 2025-01-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002245

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001694	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-20	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. Another support needs to be added

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002246

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001694	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-20	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing trafolite tag

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002247

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000742	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-20		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on light side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002248

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000742	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-20		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body. on JB side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002249

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000742	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-20	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

armour inside cable gland light side is oxidized and cable inside cable gland is found wet

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002250

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000738	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-18	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body. on JB side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

replaced

Name: Eleonora Carotenuto

Date: 2025-01-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002251

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000738	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-18		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

wrong SS cable tag on JB side, missing SS cable tag on light side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002256

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001692	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-18	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another support needs to be added

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002257

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001692	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-18	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing all lock nuts for stopped the lamp

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Point not applicable

Name: Luca Mussi

Date: 2025-01-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002259

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001692	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-18	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

trafolite tag is missing

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002262

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000730	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-14		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on ight side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002263

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000730	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-14	Emergency Lighting JB / Emergency Lighting Fixture	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body. on JB side

Name: Andrea Andreani

Date: 2024-12-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2024-12-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Giovanni Tangianu

Date: 2025-01-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003108

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001657	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-01	JB Emergency Lighting Upper Deck - Circuit No. 1	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Plug are installed without lock nuts. See attached photo

Name: Giovanni Tangianu

Date: 2025-01-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-21

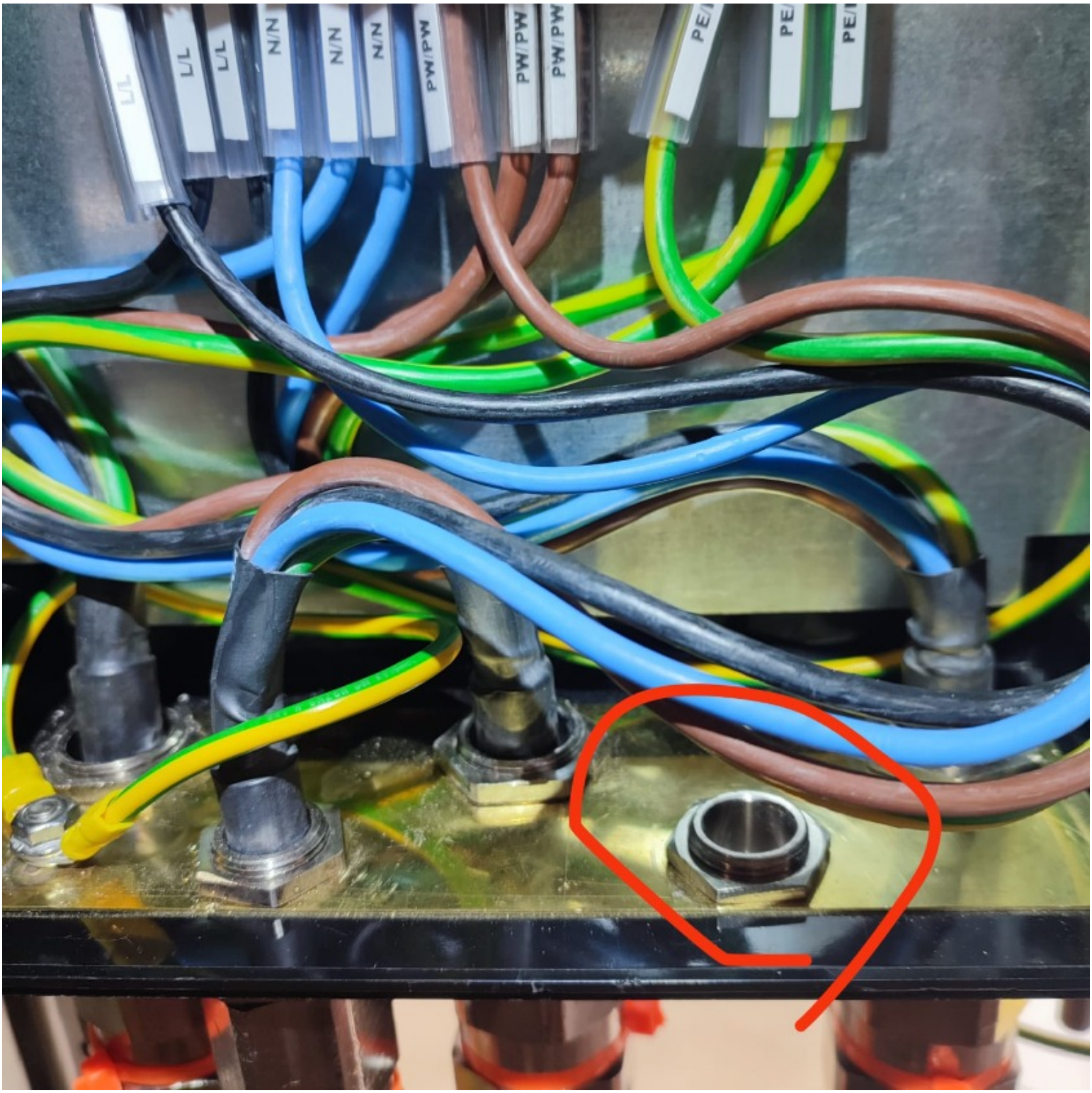
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L1
L1
L1
N/N
N/N
N/N
PW/PW
PW/PW
PW/PW
PE
PE
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003138

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001649	1.4 Discipline	Electrical
1.2 Item	EJB-200N1-08-L1-18	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Antivibration washer is missing on the plug.

Name: Luca Mussi

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-01-25

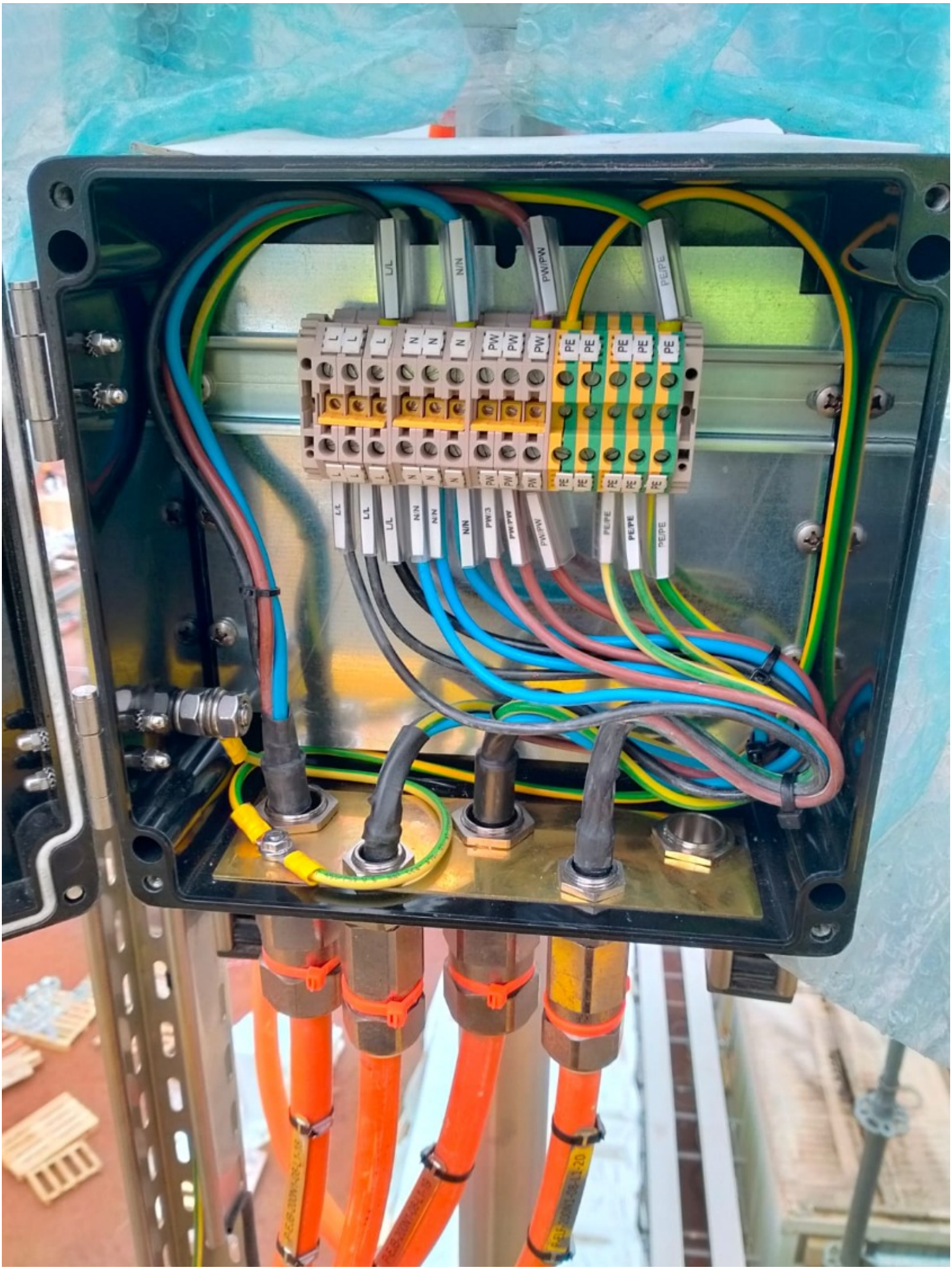
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


L/L
N/N
PW/PW
PE/PE
L
N
PW
PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003148

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001691	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-17	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing trafolite tag

Name: Andrea Andreani

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003149

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001691	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-17	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another support needs to be added

Name: Andrea Andreani

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003150

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000726	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-12		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on JB side

Name: Andrea Andreani

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-31

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003151

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001688	1.4 Discipline	ATEX
1.2 Item	ELF-200N1-08-L1-12	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. another support needs to be added

Name: Andrea Andreani

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003168

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000708	1.4 Discipline	Electrical
1.2 Item	P-ELF-200N1-08-L1-23		Emergency Lighting JB / Emergency Lighting Fixture
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

missing SS cable tag on both JB and light side

Name: Andrea Andreani

Date: 2025-01-23

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-23
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003169

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001358	1.4 Discipline	Electrical
1.2 Item	ELF-200N1-08-L1-23	EMERGENCY LIGHT	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

missing trafolite tag

Name: Andrea Andreani

Date: 2025-01-23

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-23
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-28

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003170

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001645	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-12	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990073, but actual is 24P00297990015

Name: Andrea Andreani

Date: 2025-01-23

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Andreani
3.4 Activity code	MC Mechanical Completion	Date	2025-01-23
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003175

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001297	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-04	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990065, but actual is 24P00297990008

Name: Gabriele Bertuccelli

Date: 2025-01-23

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Gabriele Bertuccelli
3.4 Activity code	MC Mechanical Completion	Date	2025-01-23
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003176

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001297	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-04	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Identification tags on terminal block are missing

Name: Gabriele Bertuccelli

Date: 2025-01-23

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Gabriele Bertuccelli
3.4 Activity code	MC Mechanical Completion	Date	2025-01-23
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-02-06

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003177

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001297	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-04	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Not enought threads are thightened on plug

Name: Gabriele Bertuccelli

Date: 2025-01-23

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Gabriele Bertuccelli
3.4 Activity code	MC Mechanical Completion	Date	2025-01-23
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-03-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003178

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001643	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-10		JB - EMERGENCY LIGHTING
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

On ATEX register 123A90-DDL-EL-LIS-20094 Sheet 19) JB serial number is 24P00297990075, but actual is 24P00297990026

Name: Gabriele Bertuccelli

Date: 2025-01-23

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Gabriele Bertuccelli
3.4 Activity code	MC Mechanical Completion	Date	2025-01-23
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003182

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001650	1.4 Discipline	Electrical
1.2 Item	EJB-200N1-08-L1-19	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The support is not well secured against vibration. Another support needs to be added

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Gabriele Bertuccelli
3.4 Activity code	MC Mechanical Completion	Date	2025-01-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installation carried out as per typical 123A90-DDL-EL-DD-20091 and 123A90-DDL-IN-DD-40017 drawing. Eng states that no additional support is needed.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002969

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001644	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-11	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 20) JB Serial Number is 24P00297990074 , but actual is 24P00297990014. See attached photo. .

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

ATEX register updated.

Name: Giovanni Tangianu

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


EJB-200N1-08-L1-11
CORTEC
TECHNOR ITALSMEA
MADE IN ITALY
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
IP66


TECHNOR
ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Gessate (MI) ITALY
MADE IN ITALY
TYPE: AQ 252612P
20A
CE 0080
II 2G
II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
T.amb. -20/+40°C
IP66
Serial Nr. 24P00297990014
WARNINGS : DO NOT OPEN WHEN ENERGIZED

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002973

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001644	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-11	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

The JB need to be cleaner front the door.

See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

JB has been cleaned.

Name: Giovanni Tangianu

Date: 2025-02-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


EJB-200N1-08-L1-11
CORTEC
TECHNOR ITALSMEA
MADE IN ITALY
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction: 2024
IP66

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002974

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001644	1.4 Discipline	ATEX
1.2 Item	EJB-200N1-08-L1-11	JB - EMERGENCY LIGHTING	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing identification numbers on terminal strip (PE) inside the (EJB-200N1-08-L1-11).
See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-16
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli
Date: 2025-02-06
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

L
L
L
N
N
N
PW
PW
PW
PE
PE
PE
PE
L/L
N/N
PW/PW
PE/PE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002980

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000610	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-01		Lighting & Small Power DB BoP / Emergency Lighting Upper Deck - Circuit No. 1
1.3 Subsystem	83-35		Emergency Lighting Upper Deck

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002981

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000712	1.4 Discipline	Electrical
1.2 Item	P-EJB-200N1-08-L1-05	Emergency Lighting JB / Emergency Lighting JB	
1.3 Subsystem	83-35	Emergency Lighting Upper Deck	

2 - OBSERVATION

Missing SS cable tags both sides

Name: Paolo Schintu

Date: 2025-01-16

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Gabriele Bertuccelli

Date: 2025-01-24

Signature:

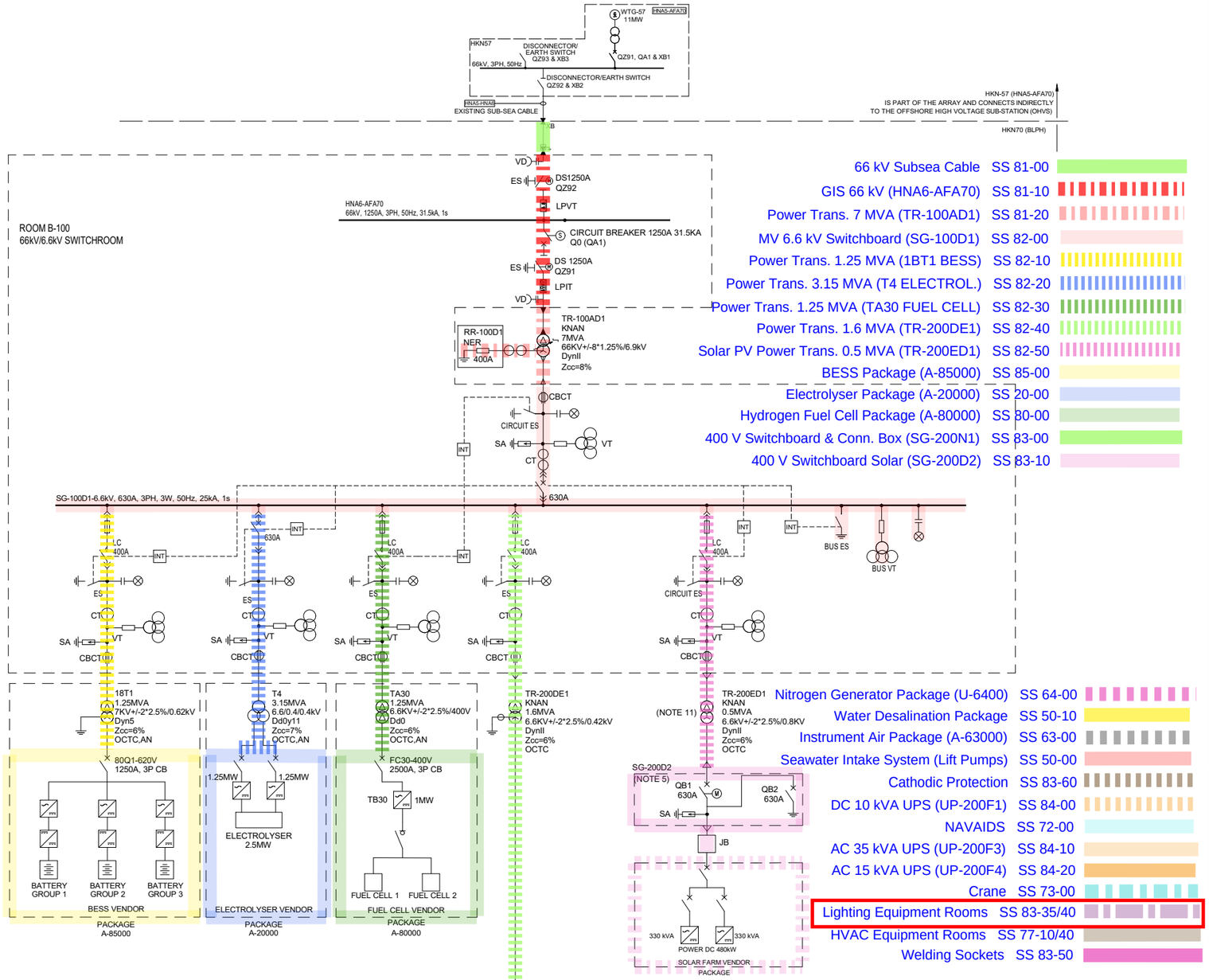
6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS



SYMBOL LEGEND:

- VOLTAGE DETECTOR
- EARTHING SWITCH DISCONNECTOR
- MOTORIZED EARTHING SWITCH
- CIRCUIT BREAKER
- FUSE
- CONTACTOR
- THREE-PHASE TRANSFORMER WITH TAP CHANGER
- THREE-PHASE TRANSFORMER
- CURRENT TRANSFORMER
- THREE-PHASE TRANSFORMER, WITH THREE WINDINGS
- NEUTRAL EARTHING RESISTOR
- SURGE ARRESTER
- CORE BALANCE CURRENT TRANSFORMER
- SURGE ARRESTOR FOR T-CONNECTOR (N.1 FOR EACH PHASE)
- VOLTAGE & CURRENT TRANSFORMER (3Ø X 2) (LPIT TYPE)
- VOLTAGE TRANSFORMER (3Ø X 2) (LPVT TYPE)
- VOLTAGE TRANSFORMER
- CABLE BOX
- T-CONNECTOR CABLE TERMINATION
- CABLE AIR TERMINATION

OLTC	= ON LOAD TAP CHANGER
OCTC	= OPEN CIRCUIT TAP CHANGER
KNAN	= NON-MINERAL OIL NATURAL AIR COOLED
AN	= AIR NATURAL
XB	= CABLE BOX
QZ	= DISCONNECT SWITCH & EARTH SWITCH
QA	= CIRCUIT BREAKER
LC	= LATCHED FUSED CONTACTOR (400A)
INT	= INTERLOCK SYSTEM
SA	= SURGE ARRESTER
CBCT	= CORE BALANCE CURRENT TRANSFORMER
ES	=EARTHING SWITCH
VD	=VOLTAGE DETECTOR
LCP	=LOCAL CONTROL PANEL
LPVT	=LOW POWER VOLTAGE TRANSFORMER
LPCT	=LOW POWER CURRENT TRANSFORMER
LPIT	=LOW POWER INSTRUMENT TRANSFORMER
JB	=JUNCTION BOX

NOTES:

1. TEMPORARY POWER SUPPLY CONNECTION BOX LOCATED ON OUTSIDE WALL OF LV SWITCHROOM / CONTAINER.
2. LOAD DEFINITION 'ESSENTIAL' / 'NON-ESSENTIAL' IS SHOWN IN THE LOAD LIST. THE CCS, EMCS AND 'SMART' SWITCHGEAR WILL OPEN / CLOSE CIRCUIT BREAKERS AS REQUIRED.
3. A COMBINED CCS/EMCS SYSTEM COMPRISES A MICROPROCESSOR BASED SYSTEM, ASSOCIATED SOFTWARE AND REQUIRED PERIPHERALS FOR MONITORING AND CONTROLLING OF ELECTRICAL POWER NETWORK. ALL ELECTRICAL EQUIPMENT AND PACKAGE UNITS SHALL BE CONNECTED TO THE CENTRAL CONTROL SYSTEM .
4. IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM SUPPLIED BY COMPANY.
5. THE SOLAR FARM IN-FEED POWER CIRCUIT BREAKERS PANEL IS LOCATED INSIDE THE LV SWITCHGEAR ROOM B-200.
6. DELETED.
7. DELETED.
8. DELETED.
9. CROSSWIND SHALL BE ABLE TO CONTROL THE BLPH 66KV MOTORISED CIRCUIT BREAKER Q0 (QA1) & MOTORISED ELECTRICAL DISCONNECTOR / EARTH SWITCH (QZ92, TYPE B) USING THEIR 'HV-SCADA' SYSTEM. THIS BACK-UP / REDUNDANT CONTROL SHALL BE ADDITIONAL TO THAT PROVIDED BY THE CCS AND BE OF HIGHER PRIORITY OVER A SEPARATE FIBRE OPTIC CABLE (FOC). THE CCS OPERATOR AND 'HV-SCADA' SHALL BOTH BE KEPT FULLY AWARE OF EQUIPMENT STATUS AT ALL TIMES. INTERTRIPPING, INHIBITS & INTERLOCKING FOR BLPH 66KV EQUIPMENT SHALL BE AS PER THE WIND FARM.
10. THE LOADS IN THE LOW VOLTAGE SWITCHGEAR AND THE CURRENT VALUES OF THE CIRCUIT BREAKERS ARE ONLY INDICATIVE.
11. NEUTRAL POINT OF TR-200ED1 SHALL NOT BE GROUNDED AS REQUIRED BY SOLAR FARM SUPPLIER IN 123A90-PML-PM-TQ-00040.

REFERENCES:

1. 123A90-DDL-EL-DG-20014 ELECTRICAL CONTROL, PROTECTION AND METERING DIAGRAMS
2. 123A90-DDL-EL-DG-20015 ELECTRICAL SINGLE LINE DIAGRAM 6.6kV SYSTEMS
3. 123A90-DDL-EL-DG-20159 ELECTRICAL SINGLE LINE DIAGRAMS LV SYSTEM
4. 123A90-DDL-EL-DG-20160 ELECTRICAL SINGLE LINE DIAGRAMS AC UPS SYSTEMS
5. 123A90-DDL-EL-DG-20161 ELECTRICAL SINGLE LINE DIAGRAMS DC UPS SYSTEMS
6. 123A90-DDL-EL-DG-20185 ELECTRICAL SINGLE LINE DIAGRAM HV SYSTEMS
7. 123A90-DDL-EL-DL-20104 ELECTRICAL EQUIPMENT LAYOUT - HV SWITCHROOM
8. 123A90-DDL-EL-DL-20105 ELECTRICAL EQUIPMENT LAYOUT - LV SWITCHROOM
9. 123A90-DDL-EL-LIS-20016 ELECTRICAL LOAD LIST and BALANCE -CCS MODE CHARGING-
10. 123A90-DDL-EL-RE-20152 ELECTRICAL EQUIPMENT SIZING CCALCULATION REPORT
11. 123A90-DDL-EL-RE-20170 ELECTRICAL SYSTEM STUDY REPORT - LOAD FLOW
12. 123A90-DDL-EL-RE-20171 ELECTRICAL SYSTEM STUDY REPORT - SHORT CIRCUIT
13. 123A90-DDL-EL-RE-20172 ELECTRICAL SYSTEM STUDY REPORT - ARC FLASH ENERGY CALCULATION
14. 123A90-DDL-EL-RE-20173 ELECTRICAL SYSTEM STUDY REPORT - HARMONICS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/03/2024	GPA	LMA/AMA	LMA/MDO	ISSUE FOR REVIEW (IFR)
00	02/11/2023	DSF	CB/AMA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

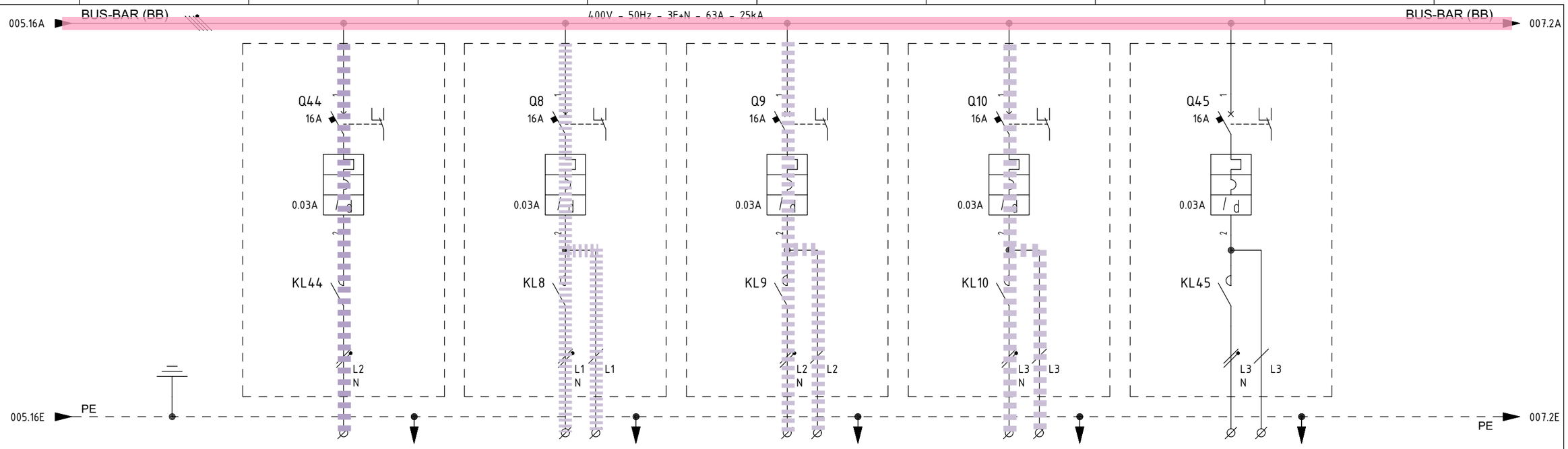
OVERALL/KEY SINGLE LINE DIAGRAM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE N/A
DRAWN GPA	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 26/03/2023
A1	DRAWING NO. 123A90-DDL-EL-DG-20158	SHEET 001	REV. 01

DRAWING NO. 123A90-DDL-EL-DG-20158 REV. 01

File Name : 123A90_DDL_EL_DG_20158_REV01.dwg

01



ITEM		1	-	EJB-200N1-08-L1-01	EJB-200N1-09-L2-01	EJB-200N1-10-L3-01	-	
UTILITY		2	NORMAL LIGHTING - SPARE	EMERGENCY LIGHTING UPPER DECK	EMERGENCY LIGHTING LOWER DECK	EMERGENCY LIGHTING STAIRS	EMERGENCY LIGHTING - SPARE	
CUBICLE		3	+02	+02	+02	+02	+02	
RATED POWER | RATED CURRENT		4/5	1 KW | 4.58 A	1.5 KW | 6.86 A	1.5 KW | 6.86 A	0.30 KW | 1.37 A	1.5 KW | 6.86 A	
TYPICAL FUNCTIONAL		6	-	-	-	-	-	
CIRCUIT BREAKER (ABB)	TYPE	7	S302P-C16 + DDA202 AC-25/0.03	S302P-D16 + DDA202 AC-25/0.03	S302P-D16 + DDA202 AC-25/0.03	S302P-D16 + DDA202 AC-25/0.03	S302P-D16 + DDA202 AC-25/0.03	
	VERSION	8	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	
	TRIP UNITS	9	In=16A - Curve C / Id=0.03A Class AC	In=16A - Curve D / Id=0.03A Class AC	In=16A - Curve D / Id=0.03A Class AC	In=16A - Curve D / Id=0.03A Class AC	In=16A - Curve D / Id=0.03A Class AC	
	Icu KA	10	25KA	25KA	25KA	25KA	25KA	
OVERLOAD	L Range A	11	-	-	-	-	-	
	Range t	12	-	-	-	-	-	
SEL. SHORT-CIRCUIT	S Range A	13	-	-	-	-	-	
	Range t	14	-	-	-	-	-	
INST. SHORT-CIRCUIT	I Range A	15	-	-	-	-	-	
	Range t	16	-	-	-	-	-	
EARTH FAULT PROTECTION	G Range A	17	-	-	-	-	-	
	Range t	18	-	-	-	-	-	
CONTACTOR (ABB)		19	ESB40-20N-06; 2x22A AC3; Vaux=230Vdc/ac	ESB40-20N-06; 2x22A AC3; Vaux=230Vdc/ac	ESB40-20N-06; 2x22A AC3; Vaux=230Vdc/ac	ESB40-20N-06; 2x22A AC3; Vaux=230Vdc/ac	ESB40-20N-06; 2x22A AC3; Vaux=230Vdc/ac	
THERMAL OVERLOAD RELAY (ABB)		20	-	-	-	-	-	
SURGE ARRESTERS (DHENN)		21	-	-	-	-	-	
TOROIDAL CURRENT TRANSFORMER (FRER)		22	-	-	-	-	-	
FUSE HOLDER (ABB)		23	-	-	-	-	-	
TWILIGHT SWITCH (ABB)		24	-	-	-	-	-	
VOLTMETER (FRER)		25	-	-	-	-	-	
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE	26	-	-	-	-	-	
	PERFORMANCE/CLASS	27	-	-	-	-	-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE	28	-	-	-	-	-	
	PERFORMANCE/CLASS	29	-	-	-	-	-	
POWER TERM. BLOCK (CABUR)	Type/mm²	30	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4	
POWER CONDUCTOR	mm²	31	-	4G4_E	4G4_E	4G4_E	-	

SUBSYSTEM 83-43 | SUBSYSTEM 83-35 | SUBSYSTEM 83-36 | SUBSYSTEM 83-37

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+

DWG n° : 231298/SD/13
Item n° : PF1002888/101

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	05/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for construction (AFC)
2	24/04/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	15/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	08/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "DP-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00013 | SHEET 006 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00013 Rev. 03

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 83-35 & process: MC & discipline : E

Electrical	83-35 Emergency Lighting Upper Deck						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
EJB-200N1-08-L1-17	JB - EMERGENCY LIGHTING	ONSHORE	C10001648	CPX31	100	2025-01-16	RFC 1
EJB-200N1-08-L1-18	JB - EMERGENCY LIGHTING	ONSHORE	C10001649	CPX31	100	2025-01-21	RFC 1
EJB-200N1-08-L1-19	JB - EMERGENCY LIGHTING	ONSHORE	C10001650	CPX31	100	2025-01-24	RFC 1
EJB-200N1-08-L1-20	JB - EMERGENCY LIGHTING	ONSHORE	C10001651	CPX31	100	2025-01-16	RFC 1
ELF-200N1-08-L1-19	EMERGENCY LIGHT	ONSHORE	C10001693	CPX00	100	2025-01-02	RFC 1
ELF-200N1-08-L1-20	EMERGENCY LIGHT	ONSHORE	C10001694	CPX00	100	2024-12-31	RFC 1
ELF-200N1-08-L1-21	EMERGENCY LIGHT	ONSHORE	C10001695	CPX00	100	2024-12-31	RFC 1
ELF-200N1-08-L1-22	EMERGENCY LIGHT	ONSHORE	C10001696	CPX00	100	2024-12-31	RFC 1
ELF-200N1-08-L1-23	EMERGENCY LIGHT	ONSHORE	C10001358	CPX00	100	2025-01-23	RFC 1
ELF-200N1-08-L1-24	Emergency Lighting Fixture	ONSHORE	C10004712	CPX00	100	2025-01-17	RFC 1
ELF-200N1-08-L1-25	Emergency Lighting Fixture	ONSHORE	C10004713	CPX00	100	2025-01-17	RFC 1
P-EJB-200N1-08-L1-01	Lighting & Small Power DB BoP / Emergency Lighting Upper Deck - Circuit No. 1	ONSHORE	C10000610	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-03	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000718	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-04	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000707	CPX09	100	2024-12-11	RFC 1
P-EJB-200N1-08-L1-05	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000712	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-06	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000714	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-07	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000716	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-08	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000721	CPX09	100	2025-01-16	RFC 1
P-EJB-200N1-08-L1-09	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000723	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-10	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000725	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-11	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000727	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-12	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000729	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-14	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000733	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-15	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000735	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-16	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000737	CPX09	100	2025-01-17	RFC 1
P-EJB-200N1-08-L1-17	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000739	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-18	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000741	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-19	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000743	CPX09	100	2025-01-15	RFC 1
P-EJB-200N1-08-L1-20	Emergency Lighting JB / Emergency Lighting JB	ONSHORE	C10000745	CPX09	100	2025-01-15	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 83-35 & process: MC & discipline : E

Electrical	83-35 Emergency Lighting Upper Deck						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
P-ELF-200N1-08-L1-01	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000705	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-02	Emergency Lighting Fixture / Emergency Lighting Fixture	ONSHORE	C10000706	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-03	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000710	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-04	Emergency Lighting Fixture / Emergency Lighting Fixture	ONSHORE	C10000711	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-05	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000713	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-06	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000715	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-07	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000717	CPX09	100	2025-01-14	RFC 1
P-ELF-200N1-08-L1-08	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000719	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-09	Emergency Lighting Fixture / Emergency Lighting Fixture	ONSHORE	C10000720	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-10	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000722	CPX09	100	2025-01-18	RFC 1
P-ELF-200N1-08-L1-11	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000724	CPX09	100	2025-01-18	RFC 1
P-ELF-200N1-08-L1-12	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000726	CPX09	100	2025-01-22	RFC 1
P-ELF-200N1-08-L1-13	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000728	CPX09	100	2025-01-02	RFC 1
P-ELF-200N1-08-L1-14	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000730	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-15	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000732	CPX09	100	2025-01-15	RFC 1
P-ELF-200N1-08-L1-16	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000734	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-17	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000736	CPX09	100	2025-01-18	RFC 1
P-ELF-200N1-08-L1-18	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000738	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-19	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000740	CPX09	100	2025-01-02	RFC 1
P-ELF-200N1-08-L1-20	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000742	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-21	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000744	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-22	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000746	CPX09	100	2024-12-31	RFC 1
P-ELF-200N1-08-L1-23	Emergency Lighting JB / Emergency Lighting Fixture	ONSHORE	C10000708	CPX09	100	2025-01-23	RFC 1
P-ELF-200N1-08-L1-24	Emergency Lighting JB/Emergency Lighting Fixture	ONSHORE	C10004716	CPX09	100	2025-01-17	RFC 1
P-ELF-200N1-08-L1-25	Emergency Lighting JB/Emergency Lighting Fixture	ONSHORE	C10004717	CPX09	100	2025-01-17	RFC 1

ITEM	Tag	P-EJB-200N1-08-L1-01	: Lighting & Small Power DB BoP / Emergency Lighting Upper Deck - Circuit No. 1			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000610		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-04 To EJB-200N1-08-L1-01

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-01	: Lighting & Small Power DB BoP / Emergency Lighting Upper Deck - Circuit No. 1			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000610		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

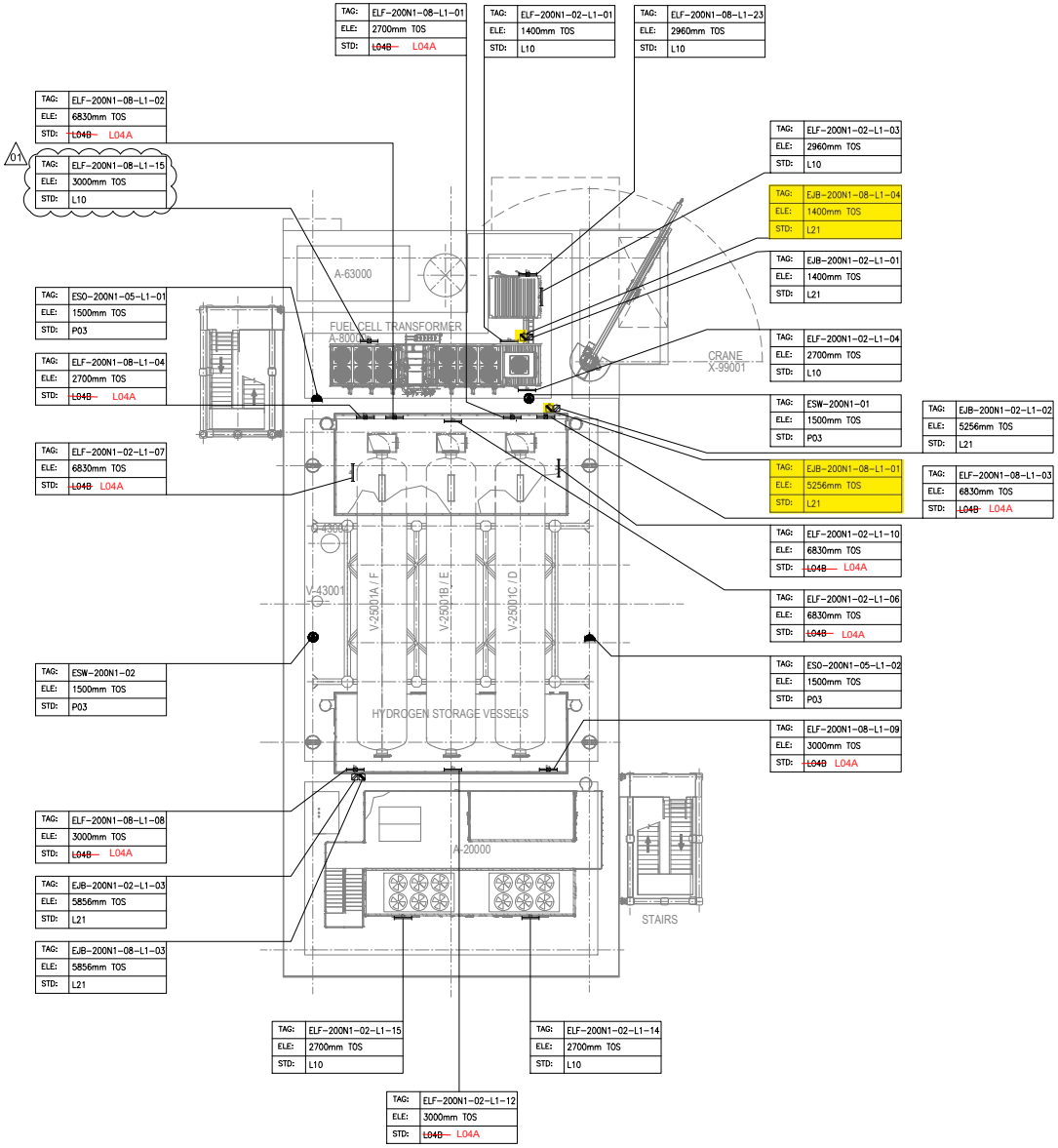
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

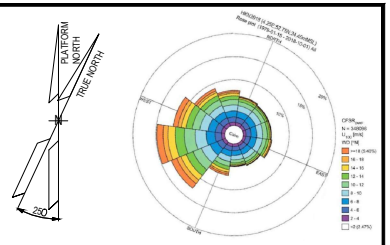
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:08:10.477Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-16T18:27:13.934Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

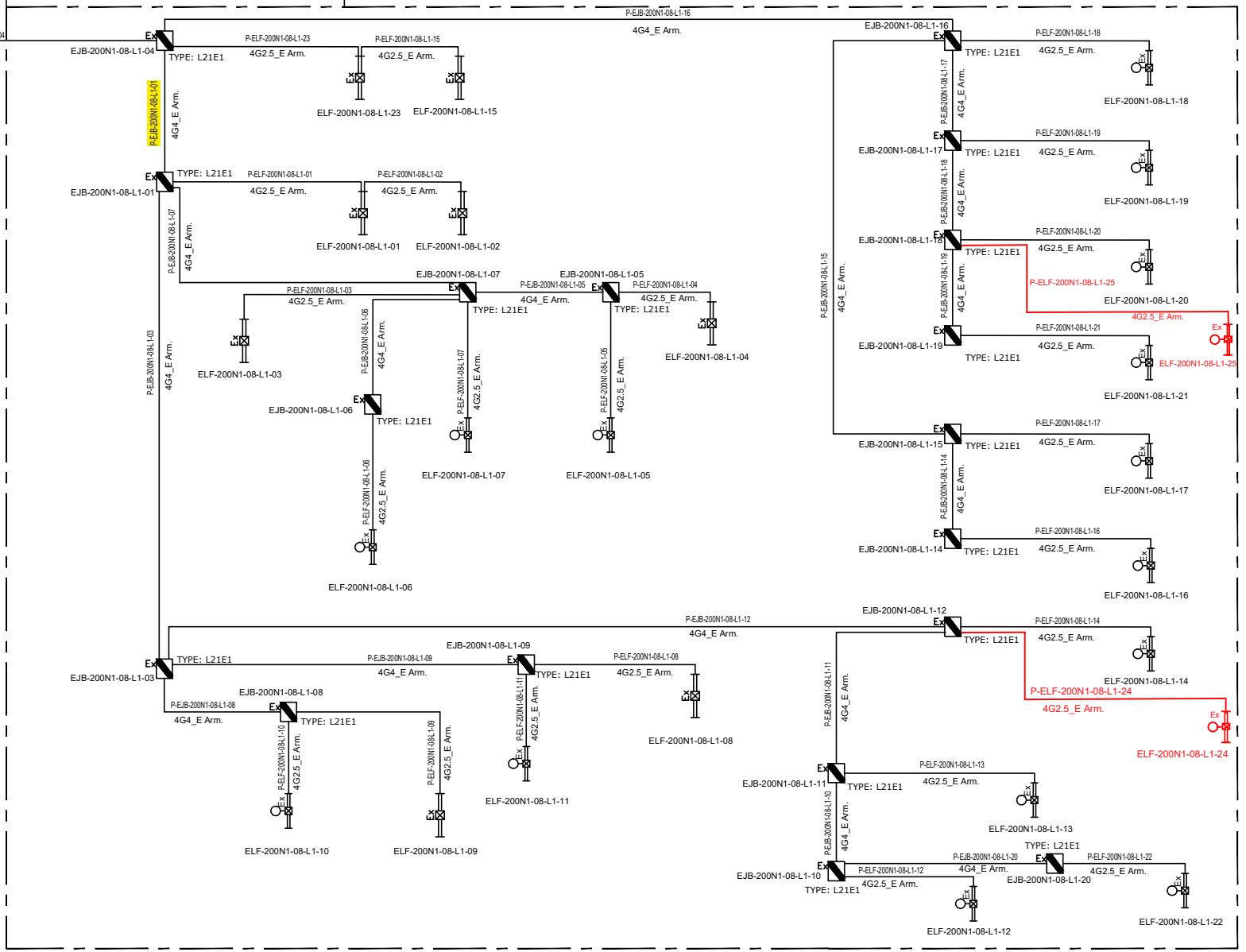
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

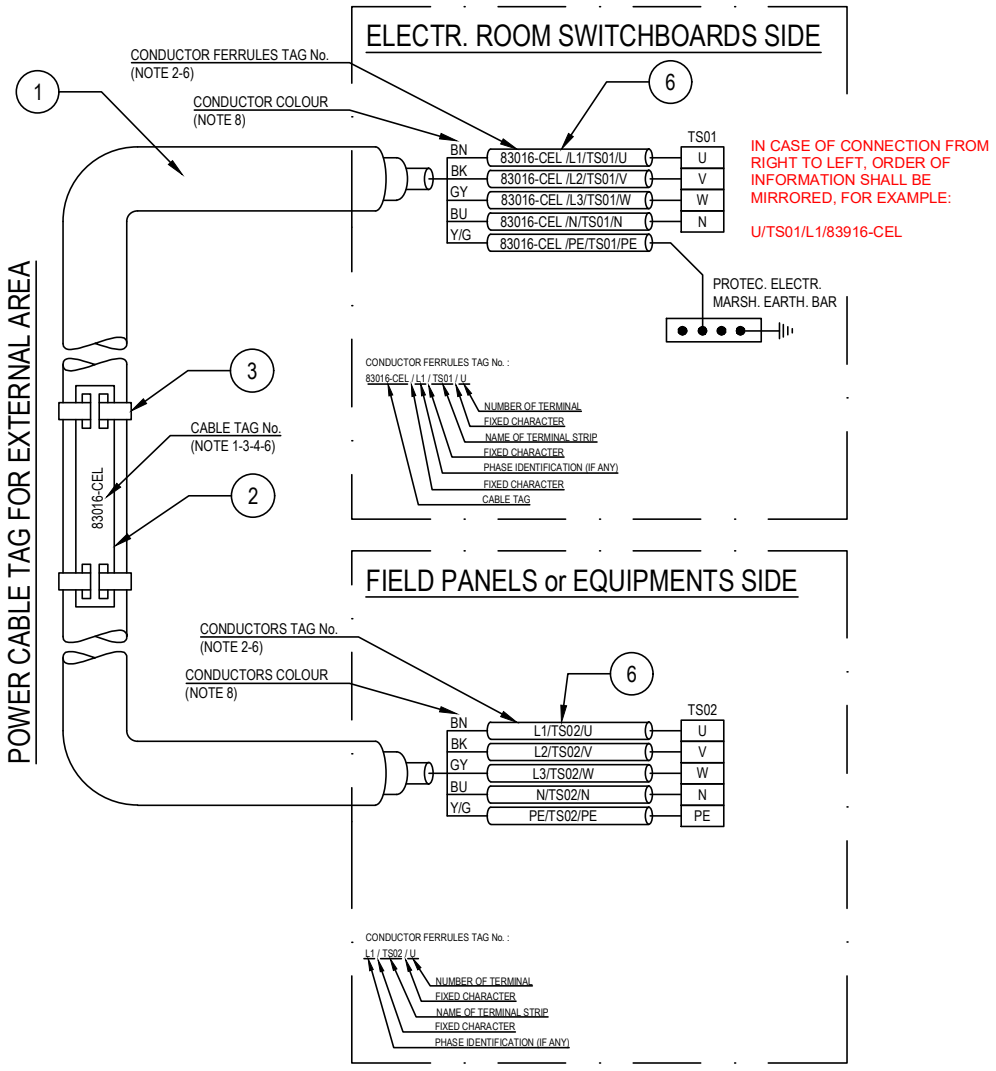
SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DG–20125	011	01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

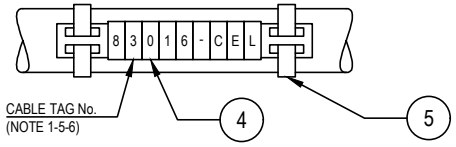
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

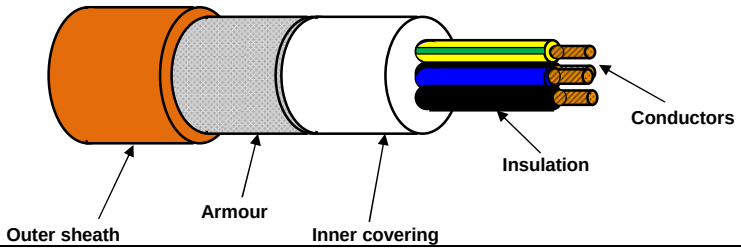
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-01	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-04	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-01	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CL2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-300-102-LVT-002 / L-300-101-LVT-073 / L-750-101-LVT-015 / L-750-101-LVT-013 / L-300-101-LVT-095 / L-300-102-LVT-009 / L-150-102-LVT-010 / L-150-102-LVT-014

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-ELF-200N1-08-L1-01	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000705		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type	Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH	Cores/Size mm²	4G2,5_E mm2	Color	ORANGE

From EJB-200N1-08-L1-01 To ELF-200N1-08-L1-01

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-01	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000705		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,03	
6		PH 2	0,03	
7		PH 3	0,03	
8	ARMOUR CONTINUITY Ω		0,03	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,03	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

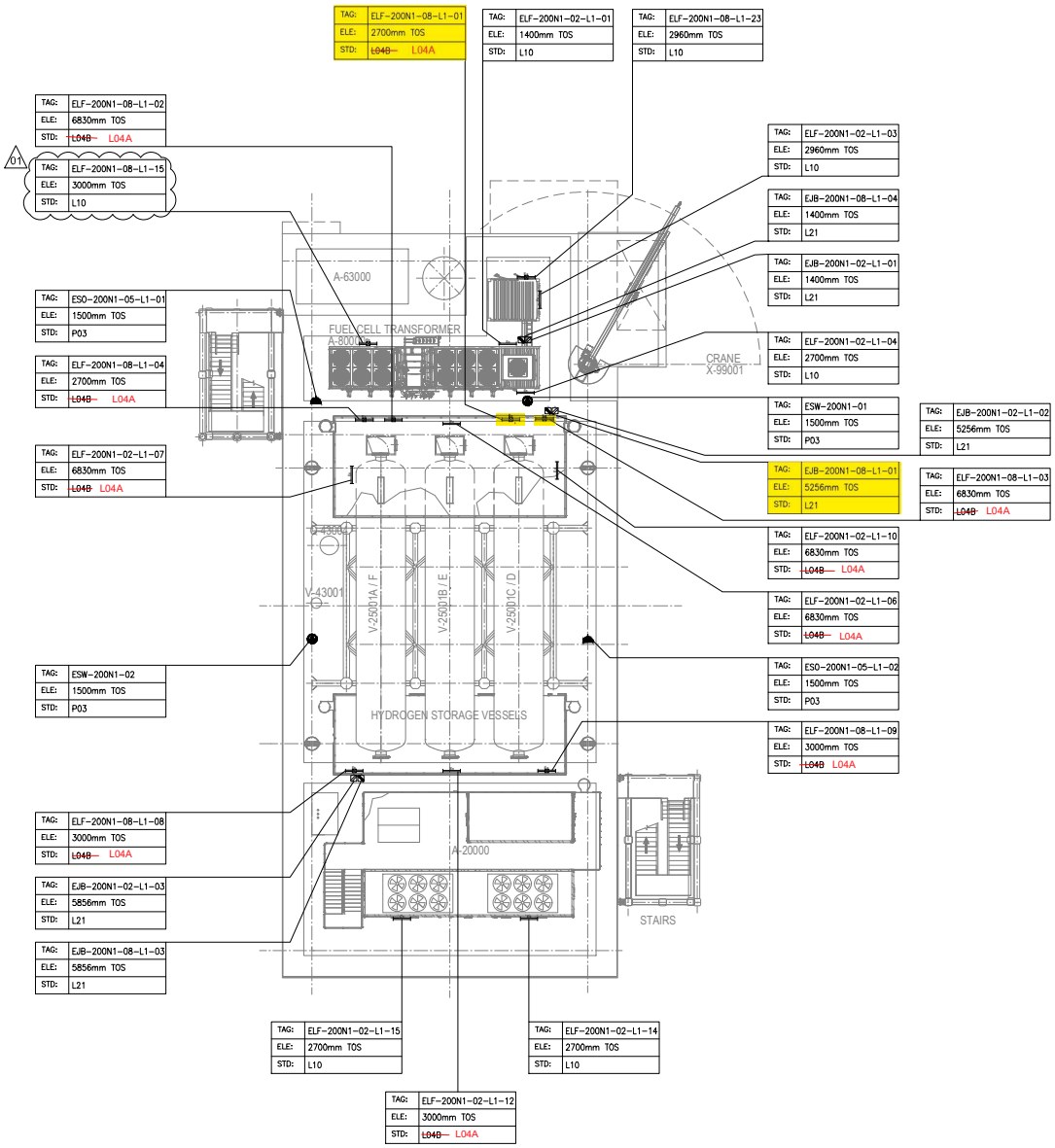
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

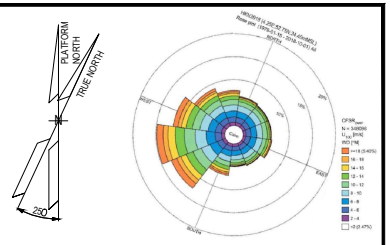
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-08	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:15:11.021Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-15T16:01:37.842Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

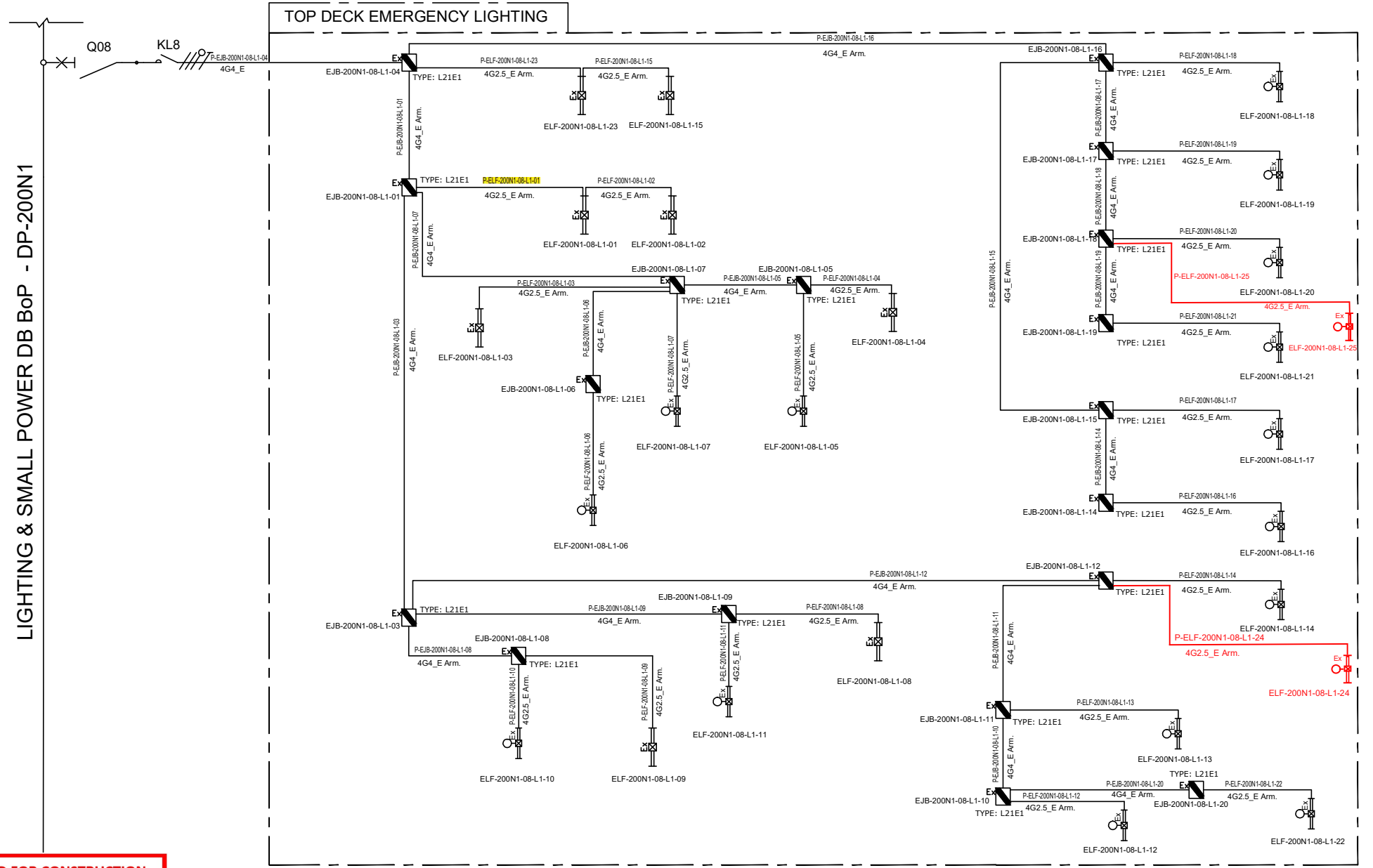
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

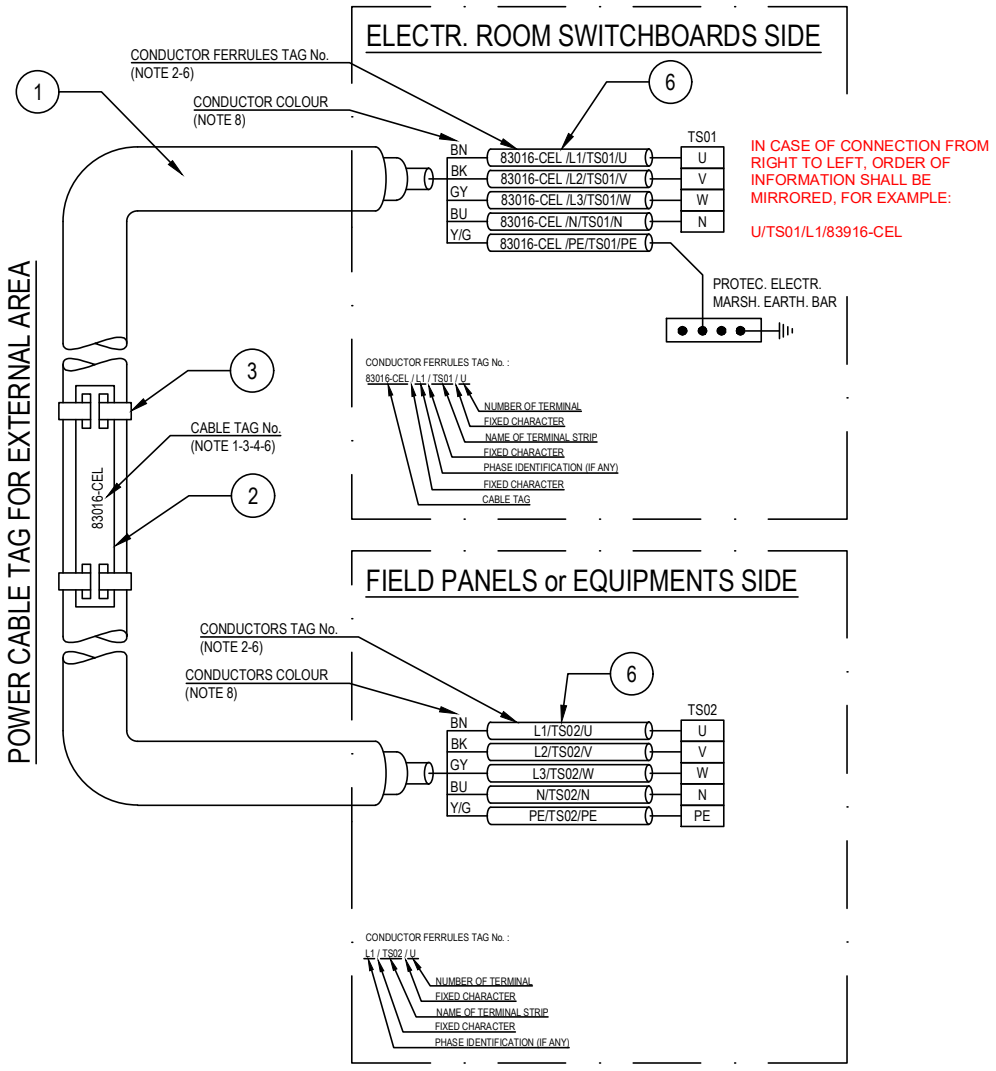
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REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
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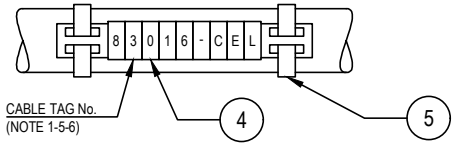
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

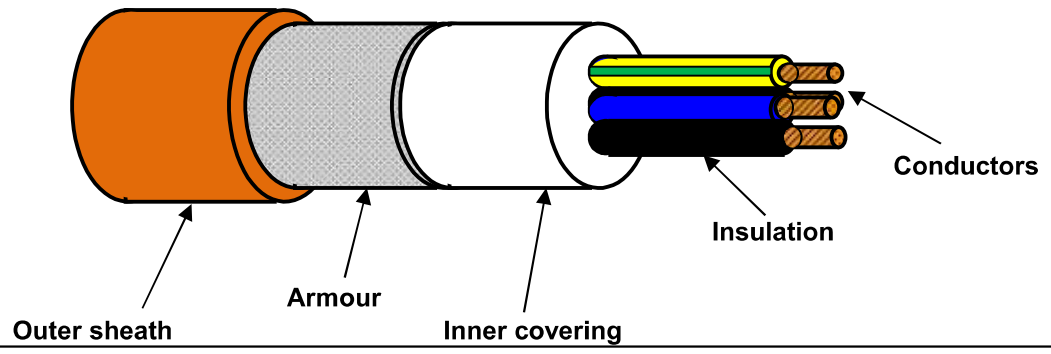
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-01	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-01	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-01	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-150-102-LVT-014 / L-150-102-LVT-010

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-02	: Emergency Lighting Fixture / Emergency Lighting Fixture		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10000706	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX09	LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From ELF-200N1-08-L1-01 To ELF-200N1-08-L1-02

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-02	: Emergency Lighting Fixture / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000706		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,1	
6		PH 2	0,1	
7		PH 3	0,1	
8	ARMOUR CONTINUITY Ω		0,1	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,1	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

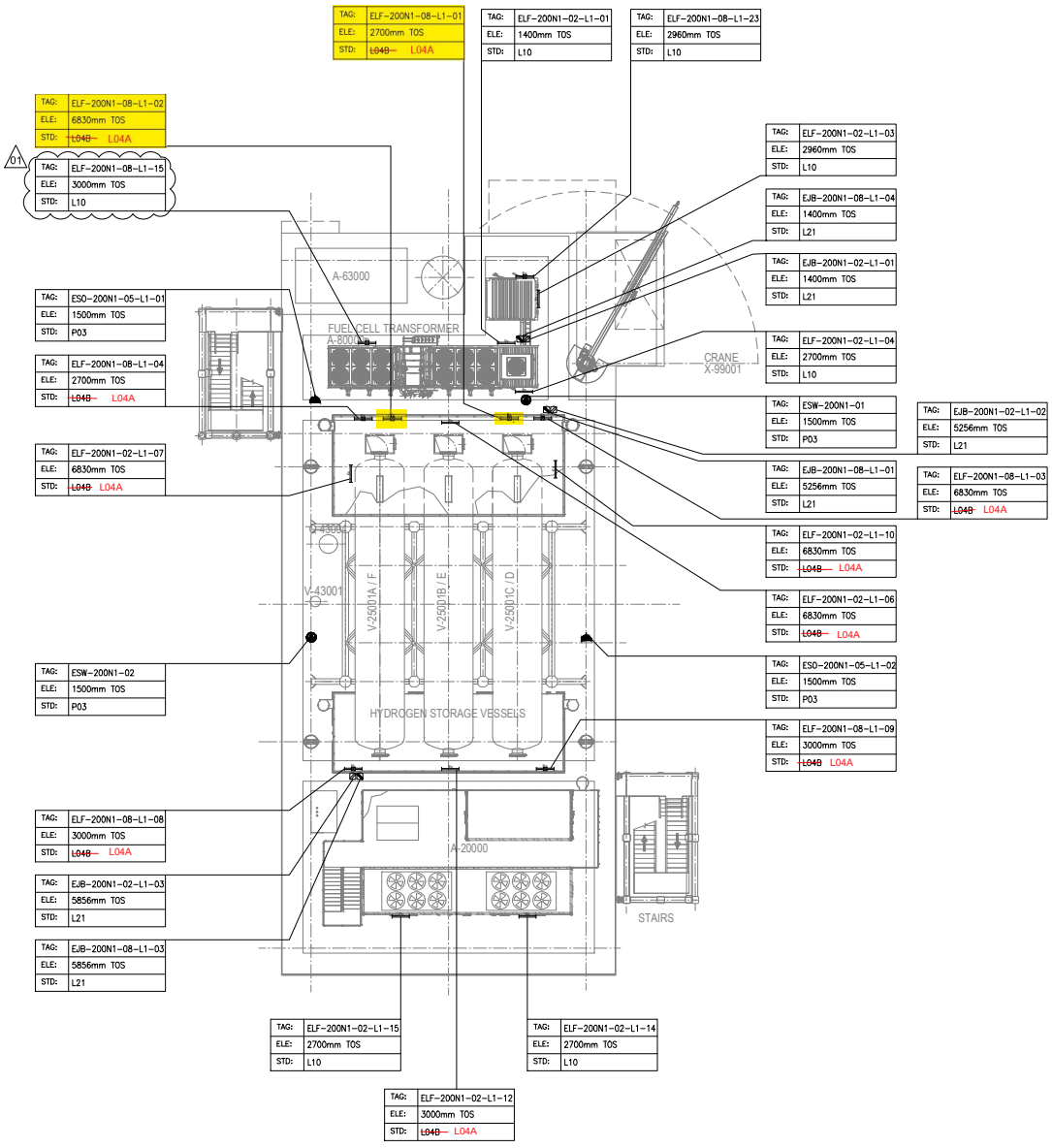
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

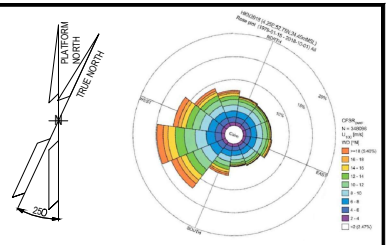
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-08	2025-01-14	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:15:32.268Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-14T16:33:19.103Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

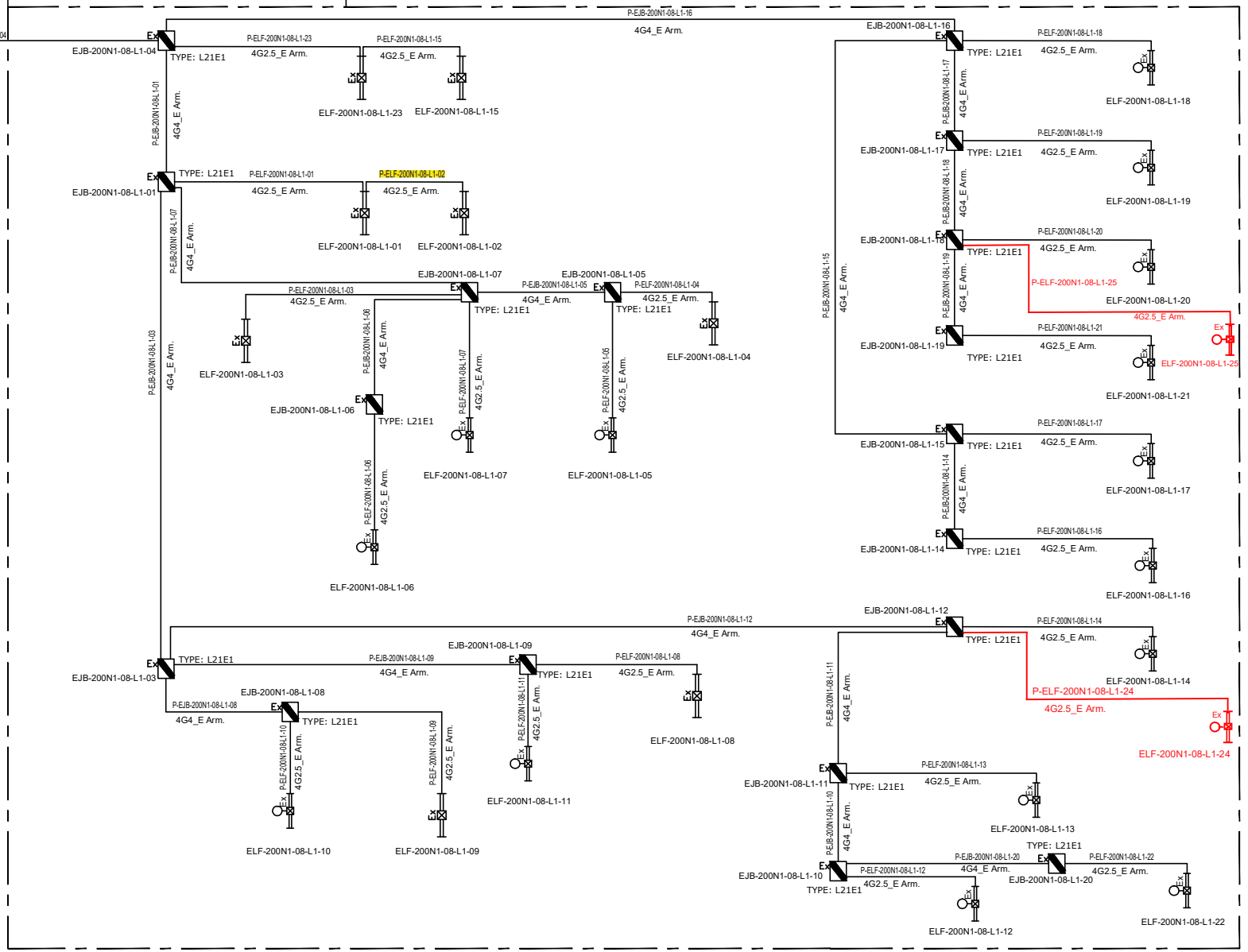
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

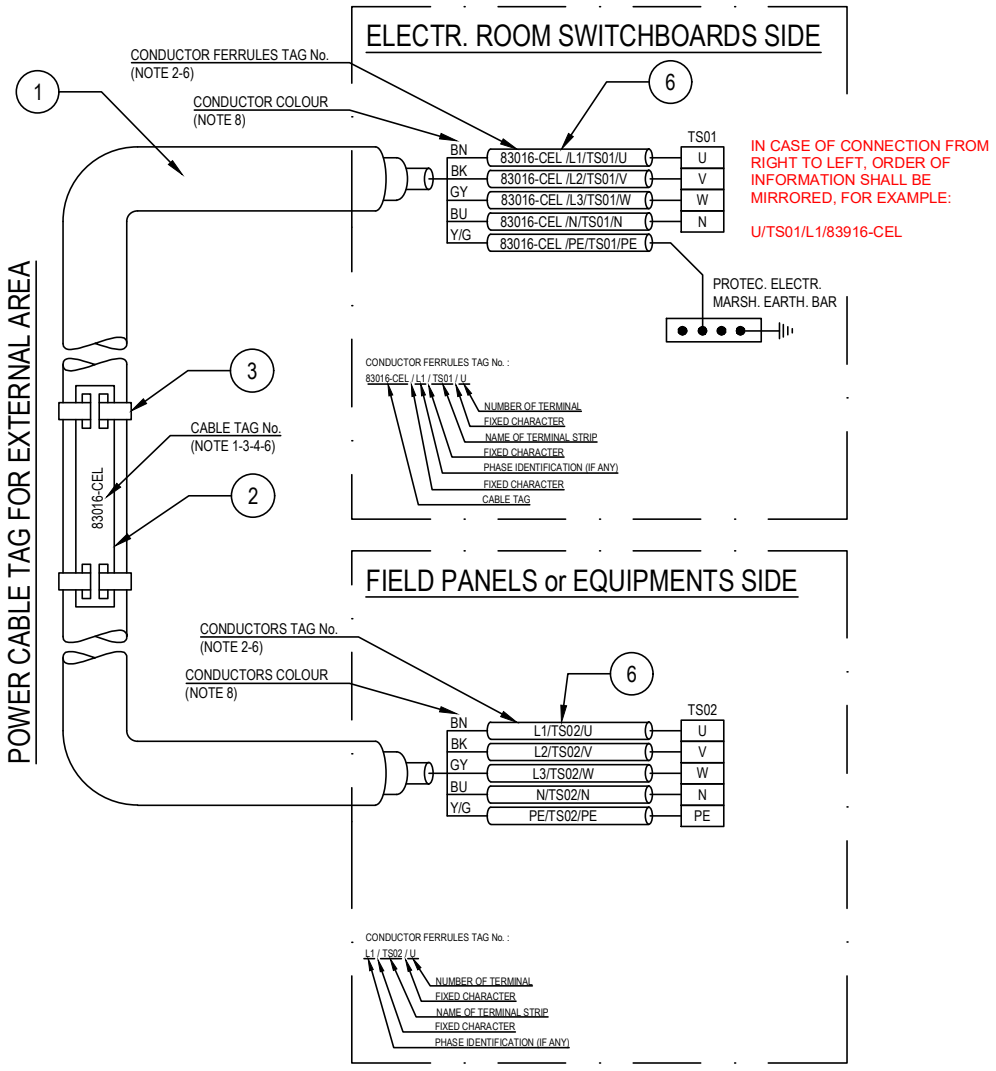
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

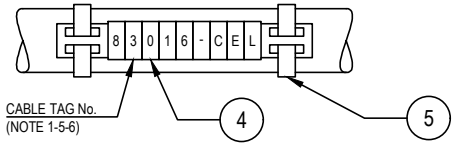
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

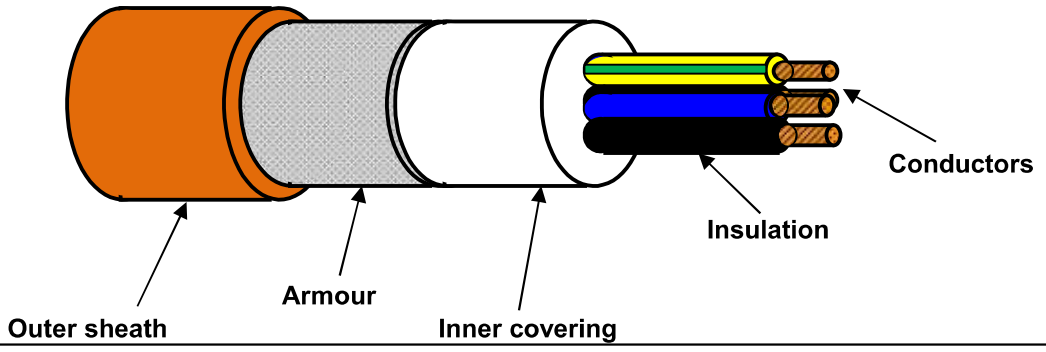
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-02	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						ELF-200N1-08-L1-01	Emergency Lighting Fixture	Upper Deck		ELF-200N1-08-L1-02	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-150-102-LVT-010

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-04	: Emergency Lighting JB / Emergency Lighting JB	Dwg	123A90-DDL-EL-LIS-20148		
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	LD_B-200/LD		
TASK	code	C10000707	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form CPX09	LV Power Cable

CABLE DATA

Type Cu Cl.2/EPR/LSZH Cores/Size mm² 4G4_E mm2 Color GREY

From DP-200N1 To EJB-200N1-08-L1-04

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	PL
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-04	: Emergency Lighting JB / Emergency Lighting JB		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	LD_B-200/LD	
TASK	code	C10000707	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX09	LV Power Cable

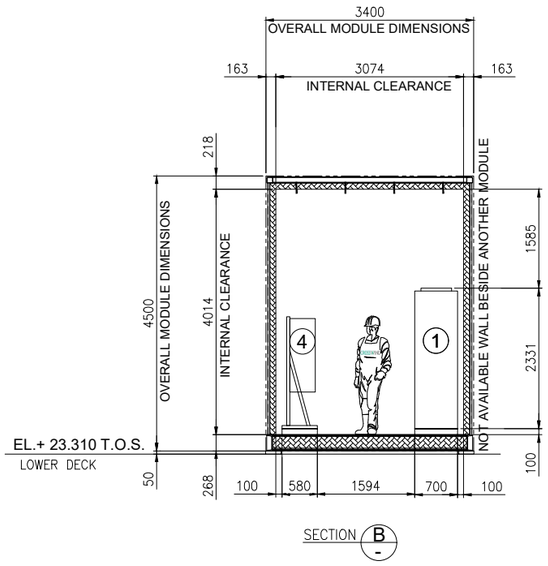
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,6	
6		PH 2	0,6	
7		PH 3	0.6	
8	ARMOUR CONTINUITY Ω		NA	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,6	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

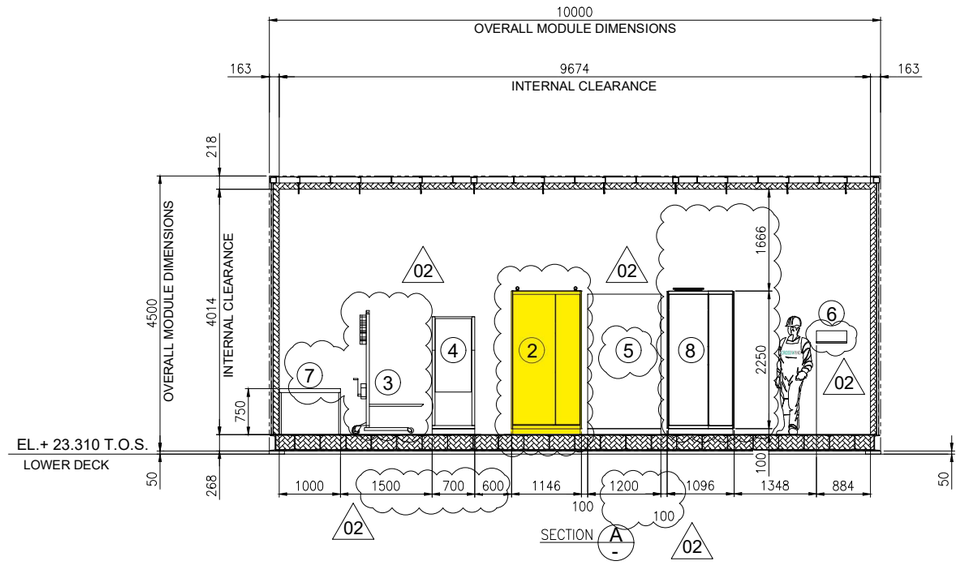
Comments: Nota 4: refer to PL C30000679

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-09	2024-12-11	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-09T10:28:38.998Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-11T15:36:06.123Z	

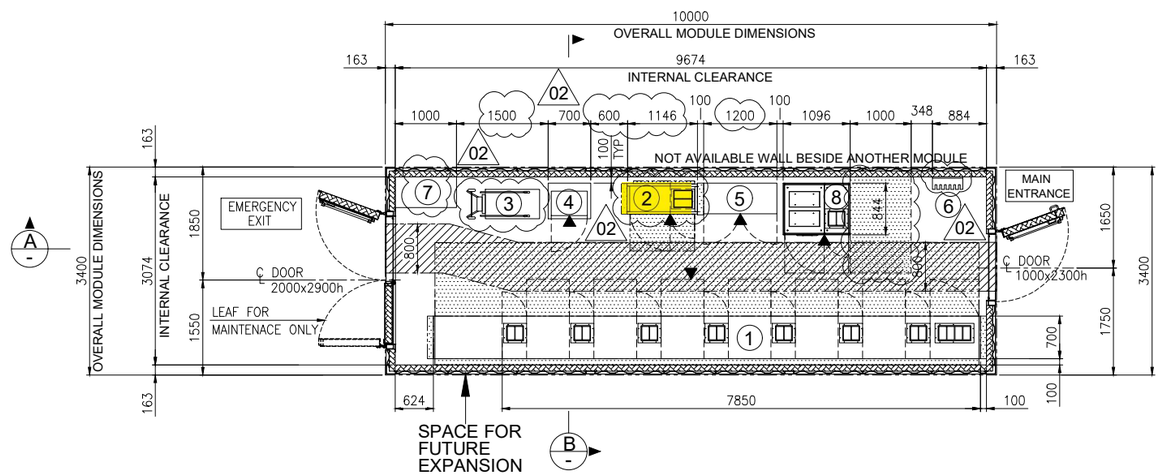
DRAWING NO. 123A90-DDL-EL-DL-20105 | REV. 02



SECTION B



SECTION A

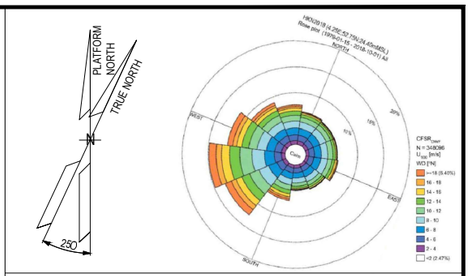


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

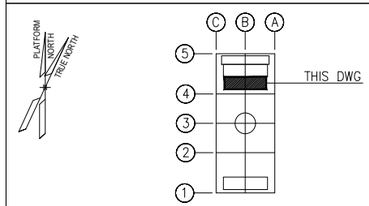
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20105
REV.: 2_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	27/05/2024	FMO	LMA/AMA	LMA/MDO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/03/2024	GPA	LMA/AMA	LMA/MDO	ISSUE FOR REVIEW (IFR)
00	08/11/2023	DSF	CB/AMA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

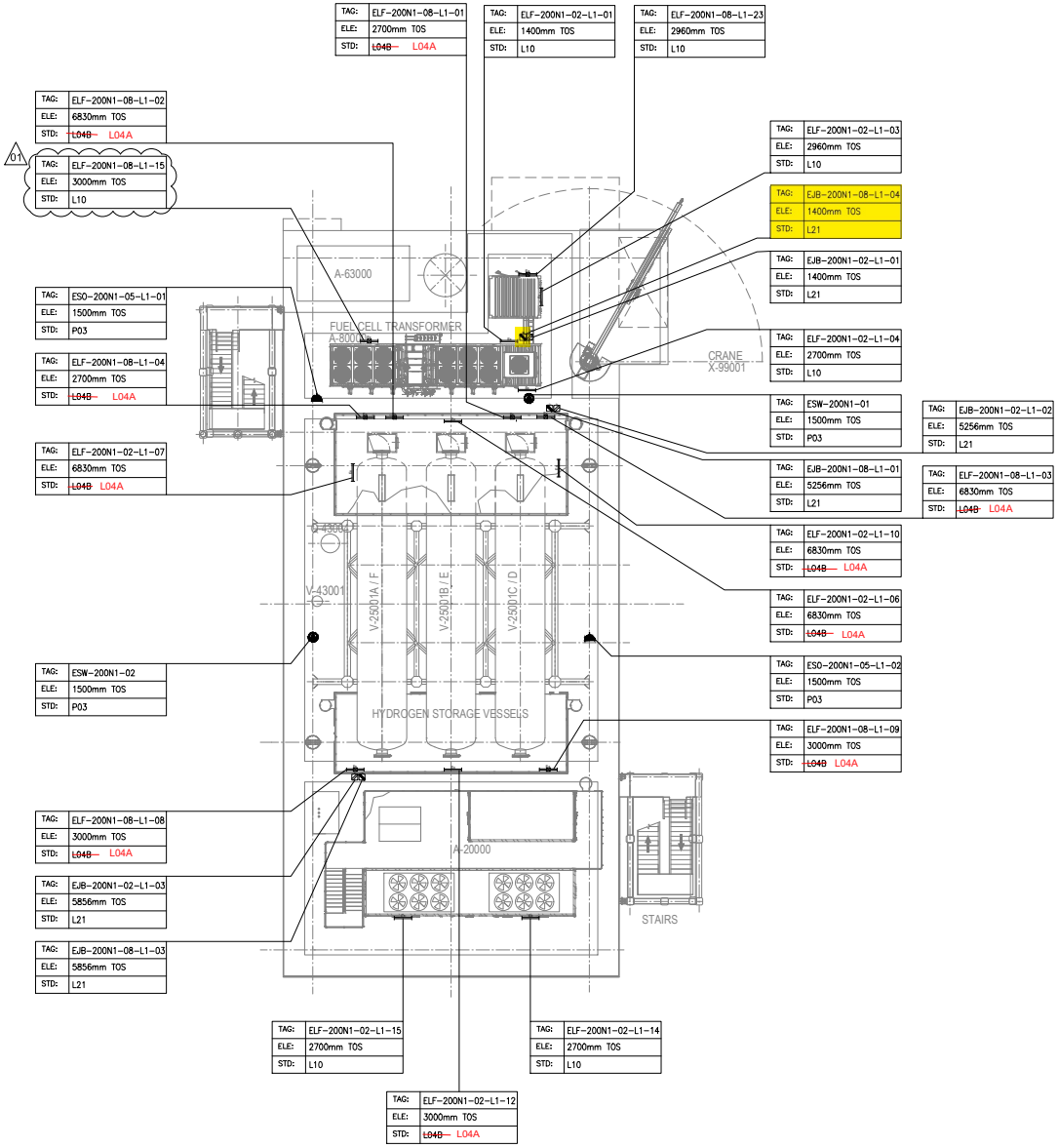
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:50
DRAWN FMO | CHECKED LMA/AMA | APPROVED LMA/MDO | DATE 27/05/2024
A1 | DRAWING NO. 123A90-DDL-EL-DL-20105 | SHEET 001 | REV. 02

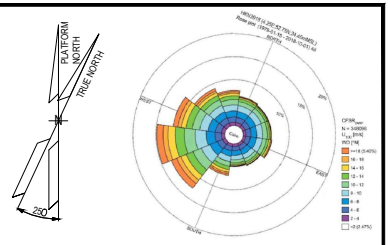
File Name : 123A90-DDL-EL-DL-20105_REV02.dwg

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

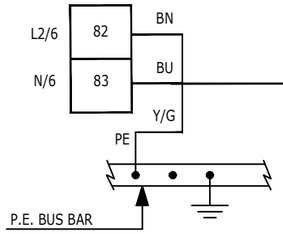
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

FROM	TO

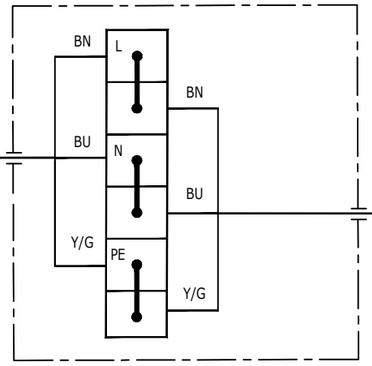
DESCRIPTION: LIGHTING & SMALL POWER DB BOP
TAG NUMBER: DP-200N1

CUBICLE/CB: +03/Q6



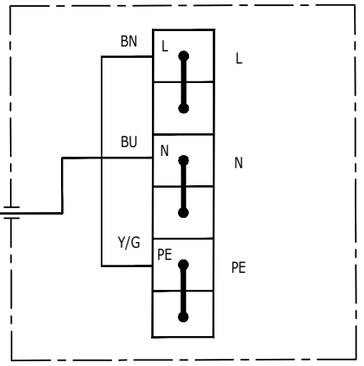
P-ESO-200N1-06-L2-01
3G10 mm²

DESCRIPTION: SMALL POWER SOCKET JB(LOWER DECK)
TAG NUMBER: ESO-200N1-06-L2-01

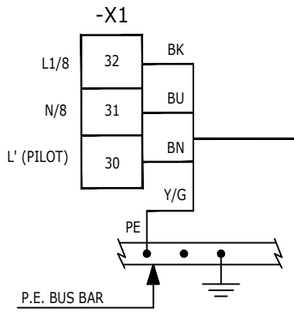


P-ESO-200N1-06-L2-02
3G10 mm²

DESCRIPTION: SMALL POWER SOCKET JB(LOWER DECK)
TAG NUMBER: ESO-200N1-06-L2-02

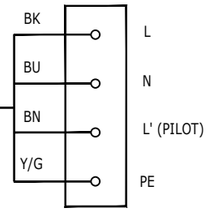


CUBICLE/CB: +01/Q8

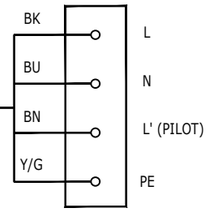


P-EJB-200N1-08-L1-04
4G4_E mm²

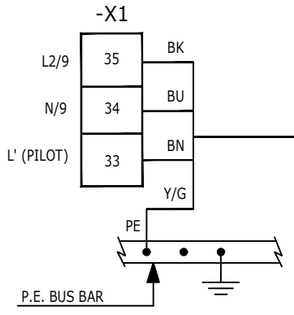
DESCRIPTION: EMERGENCY LIGHTING UPPER DECK - CIRCUIT NO. 1
TAG NUMBER: EJB-200N1-08-L1-04



DESCRIPTION: EMERGENCY LIGHTING LOWER DECK - CIRCUIT NO. 1
TAG NUMBER: EJB-200N1-09-L2-01



CUBICLE/CB: +01/Q9



P-EJB-200N1-09-L2-01
4G4_E mm²

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20149**

REV.:	DATE:	SIGNATURE:
2_J	27/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	19/11/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/10/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	SAI	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

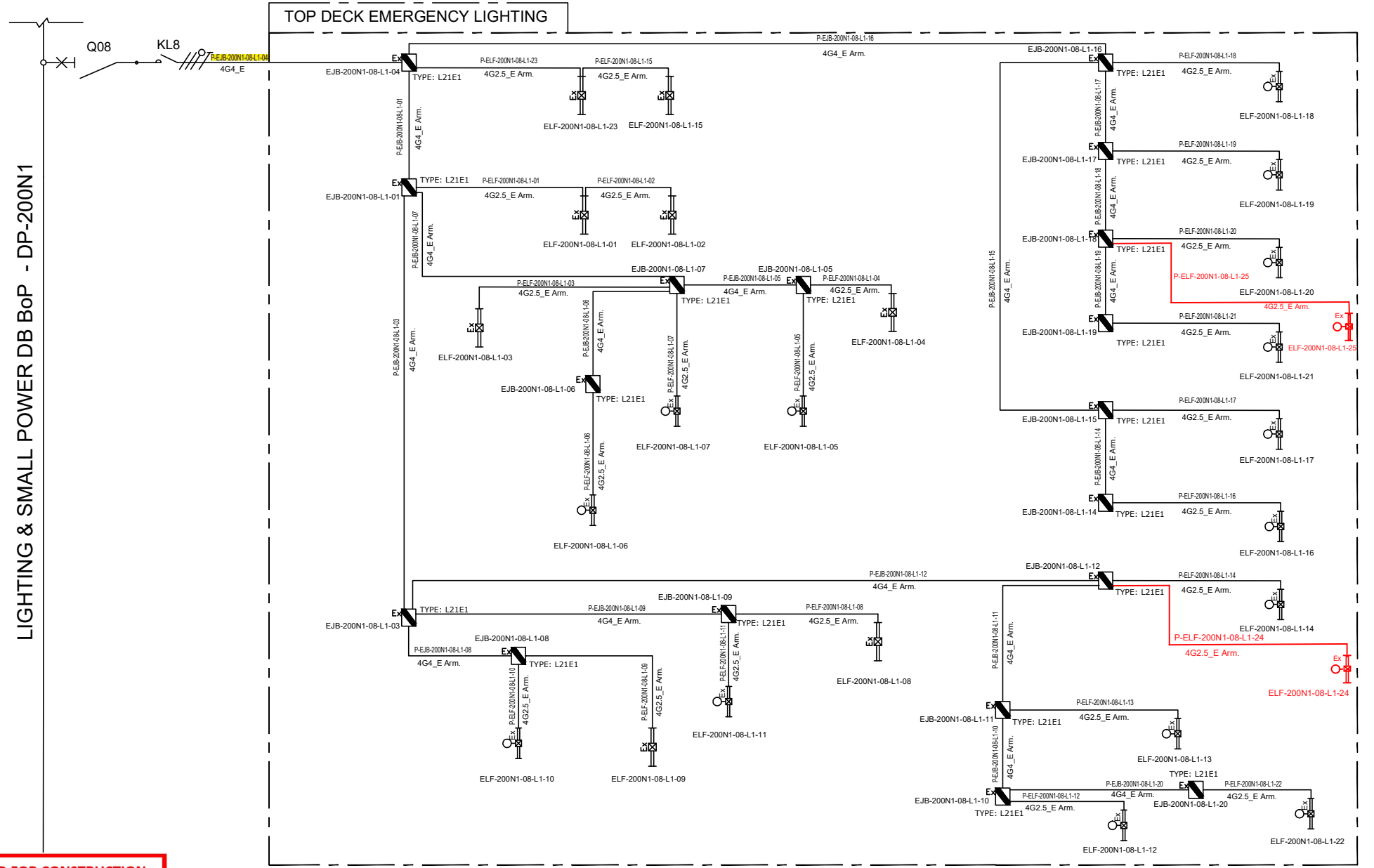
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
LIGHTING & SMALL POWER DB BOP

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 046 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20149 Rev. 02



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

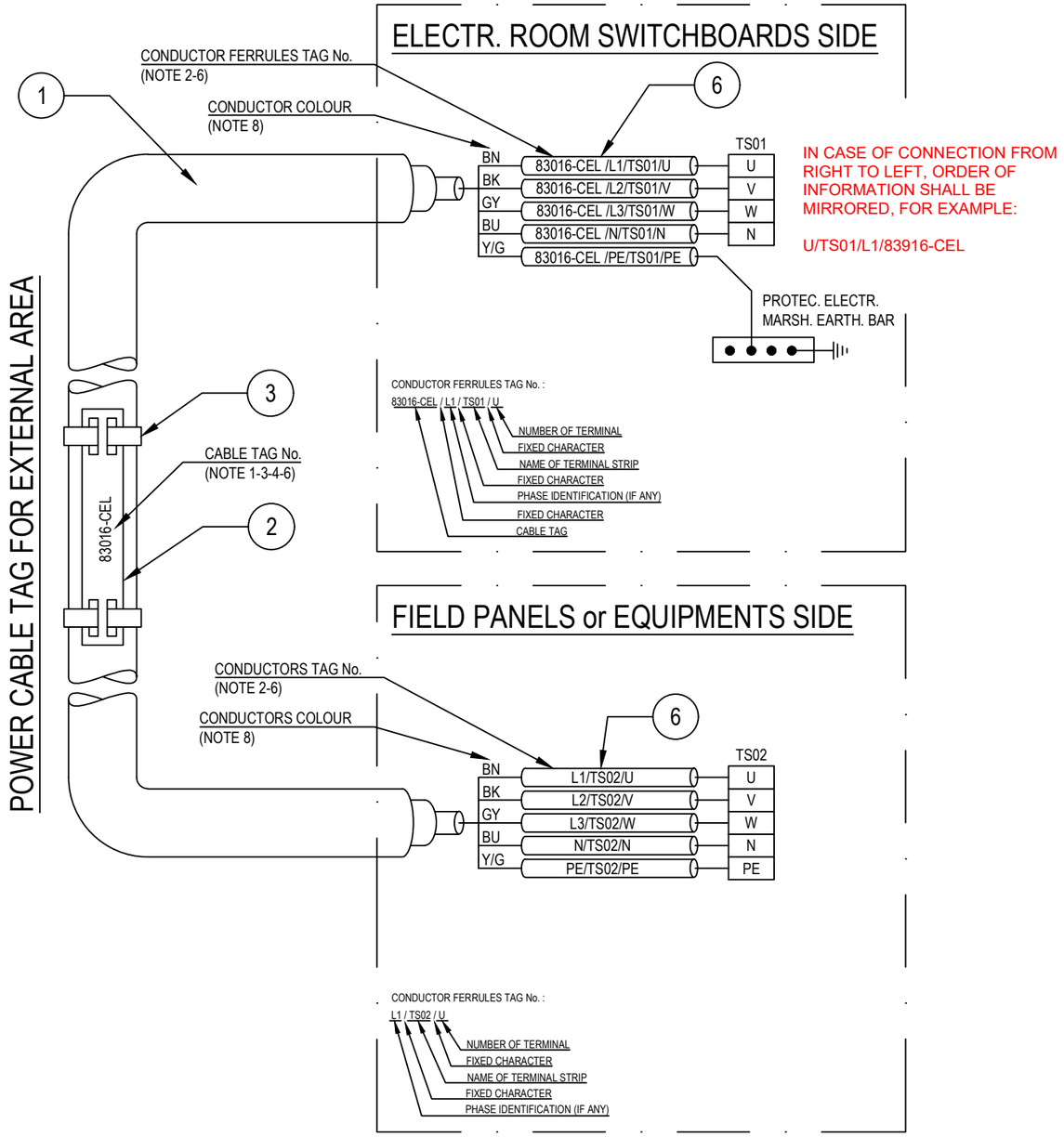
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

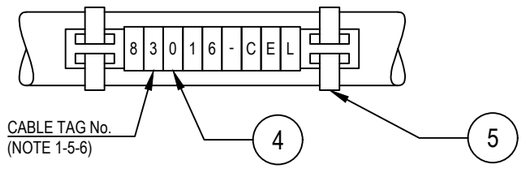
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_B	28/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

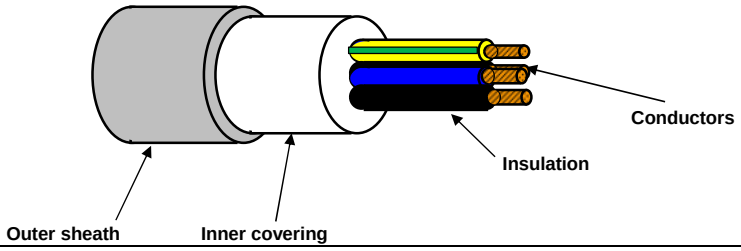
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Cu Cl.2/EPR/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Flame Retardant



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	Not required
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,2 mm
Outer sheath color code:	**Grey**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - EPR/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Outer diameter :	(15,5 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 1100 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-04	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						DP-200N1	LV 0,4 / 0,23 kV Distribution Switchgear	Lower Deck (B-200)	01/Q8	EJB-200N1-08-L1-04	Emergency Lighting JB	Upper Deck	Junction Box	ELECV11-4G4_E	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 4G4mm² _E - Grey	M25	n.a.			T1_M25_Single				L-450-101-LVT-030 / L-600-101-LVT-020 / L-600-101-LVT-019 / L-600-101-LVT-017 / E-MCT-203 / L-750-101-LVT-013 / L-750-101-LVT-015 / L-300-101-LVT-073 / E-MCT-U06 / L-300-102-LVT-002

ITEM	Tag	P-ELF-200N1-08-L1-23	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000708		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-04 To ELF-200N1-08-L1-23

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ITEM	Tag	P-ELF-200N1-08-L1-23	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-40	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000708		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,1	
6		PH 2	0,1	
7		PH 3	0,1	
8	ARMOUR CONTINUITY Ω		0,1	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,1	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	142,5 M Ohm	
11		PH2 / PH1-PH3-A-E	90,7 M Ohm	
12		PH3 / PH1-PH2-A-E	89,7 M Ohm	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

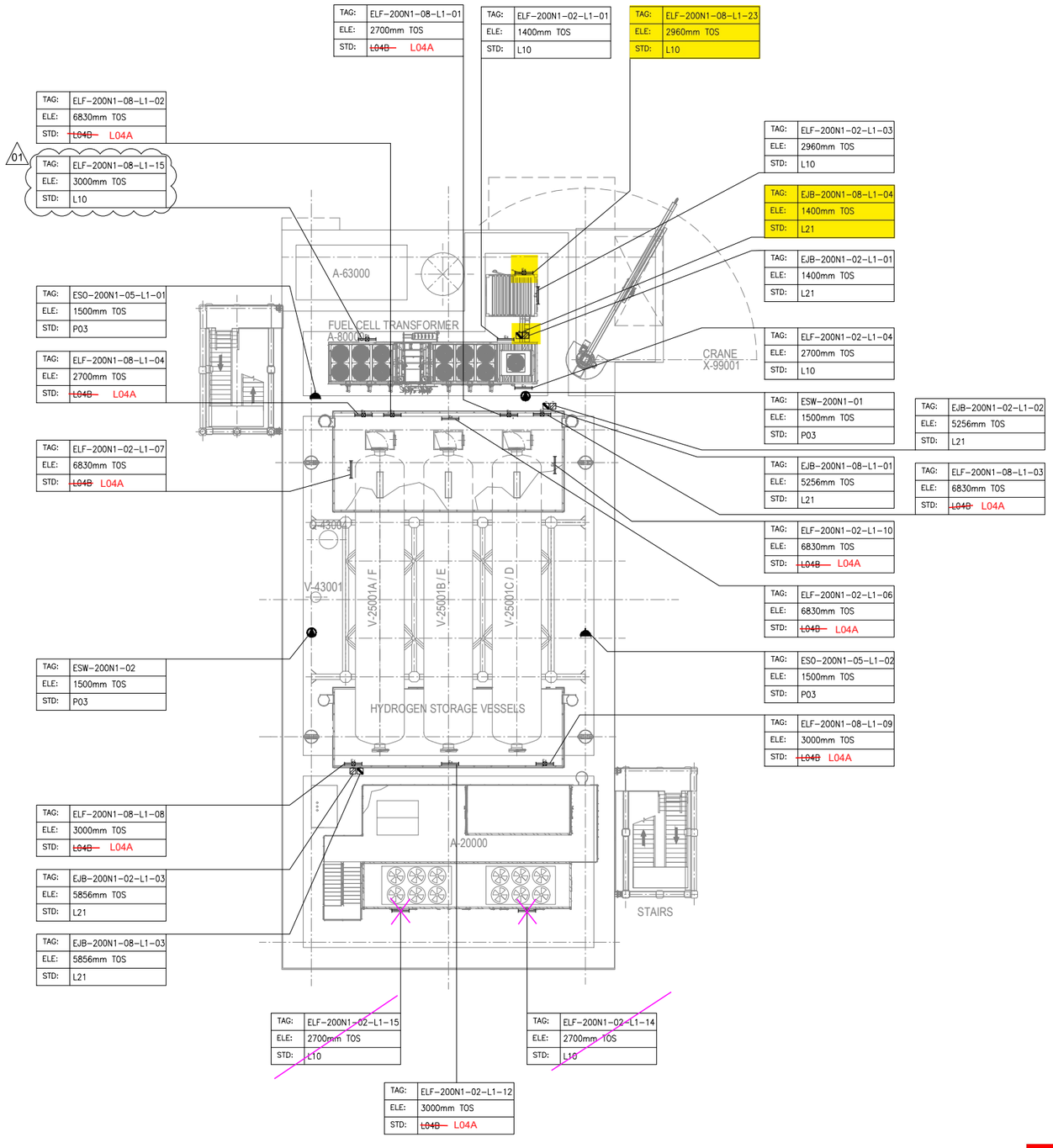
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETRO SIN-STRU-017 S/N:H240103023
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	12/10/2024

Comments: Nota 4: refer to PL C30000681

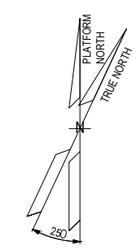
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Andrea Andreani	
Date	2025-01-08	2025-01-23	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:15:44.129Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-23T16:17:35.242Z	

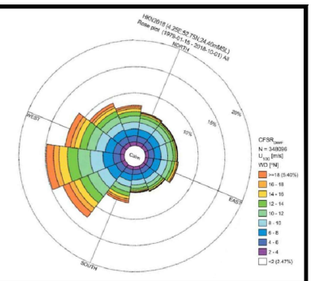
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

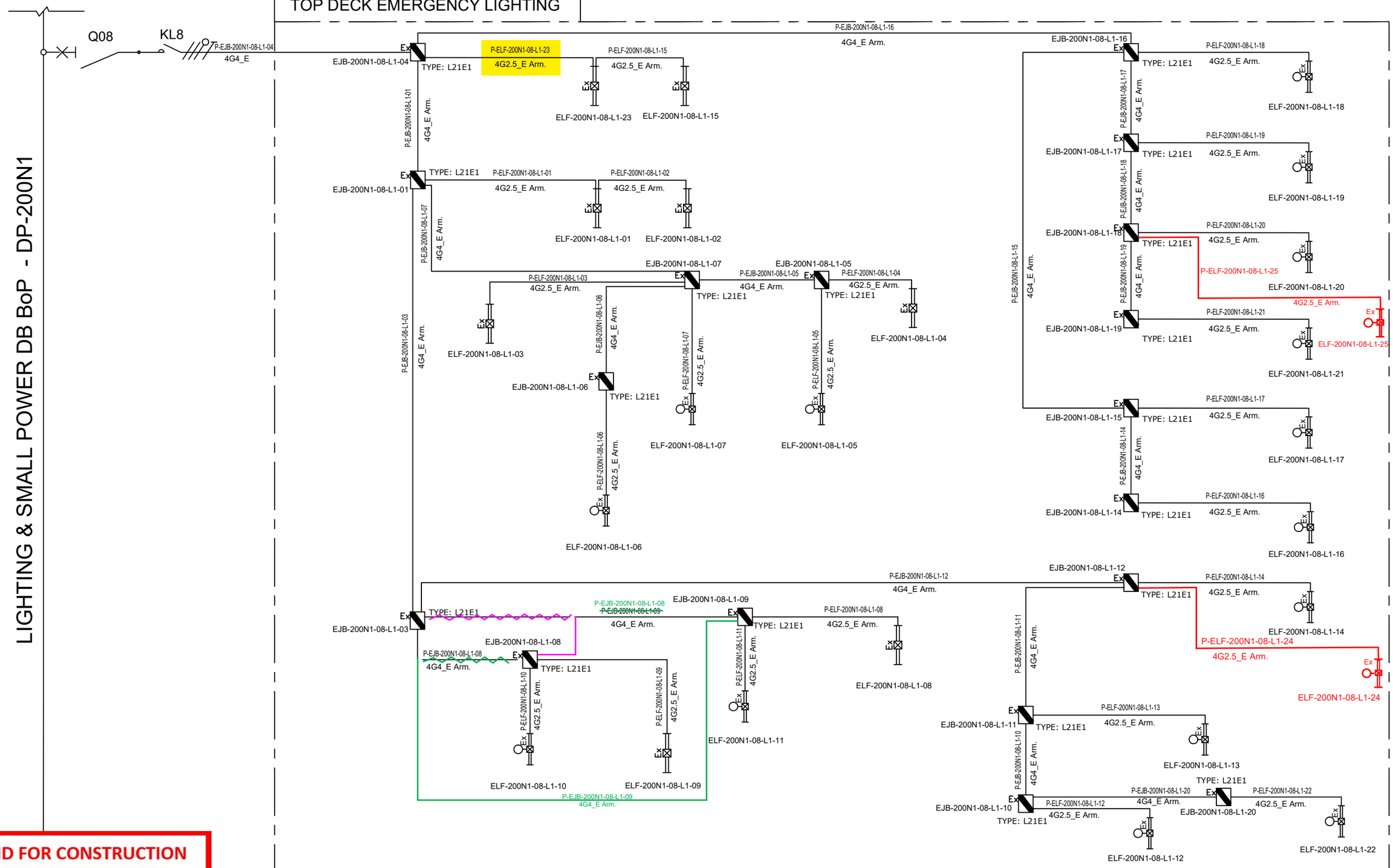
TITLE :
BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

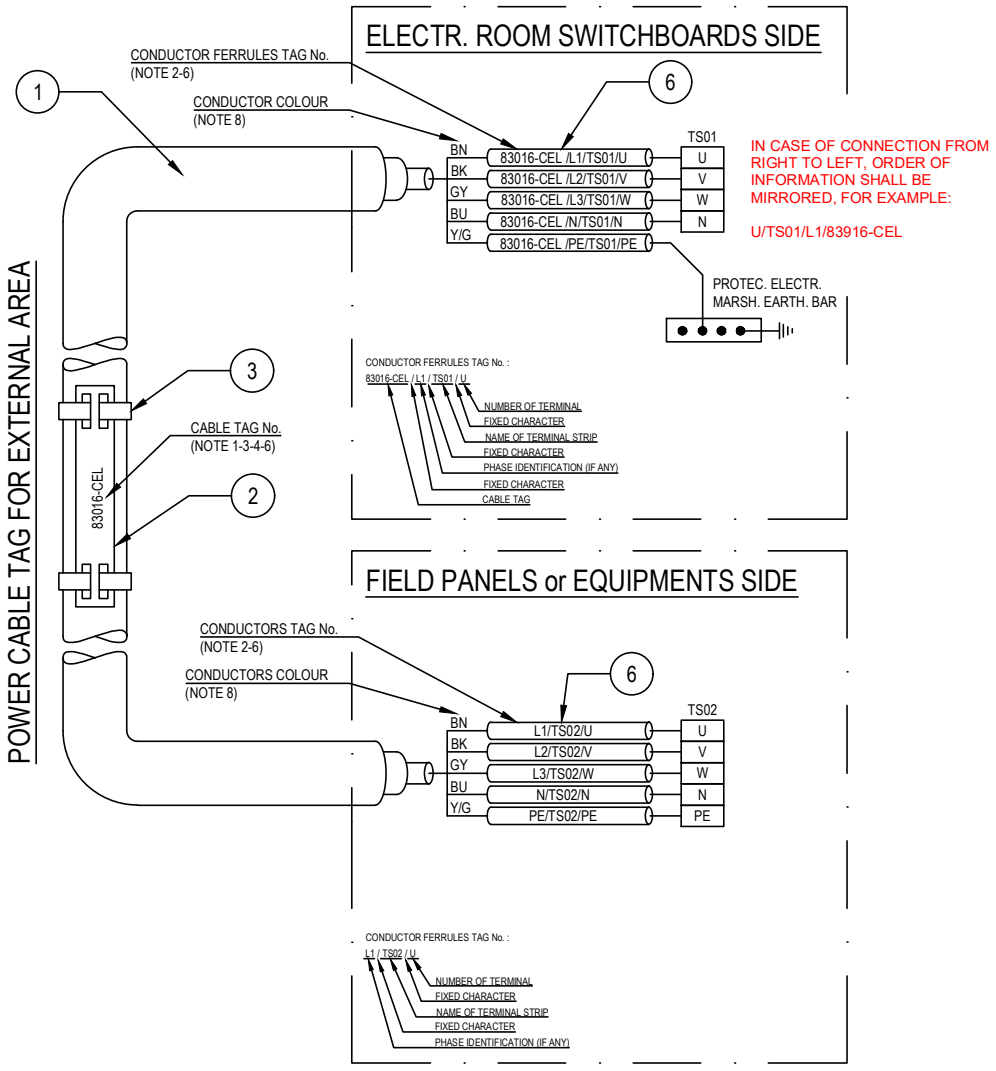
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

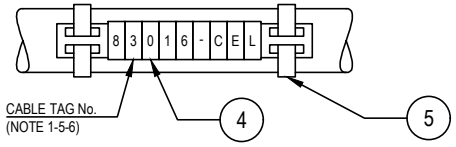
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

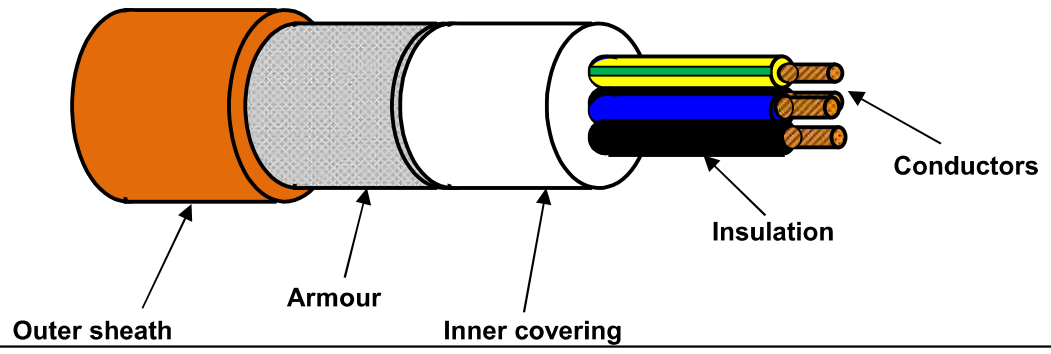
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Sectio	Material ID	Material Desc.	Gland Standard	From Gland	From Entr	From Fit	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-23	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-04	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-23	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2,5_E	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm² _E - Orange	M20	T2_M20_Double			T2_M20_Double				L-300-102-LVT-002 / L-50-102-LVT-072

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-03	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000710		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-07 To ELF-200N1-08-L1-03

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-03	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000710		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,08	
6		PH 2	0,08	
7		PH 3	0,08	
8	ARMOUR CONTINUITY Ω		0,08	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,08	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

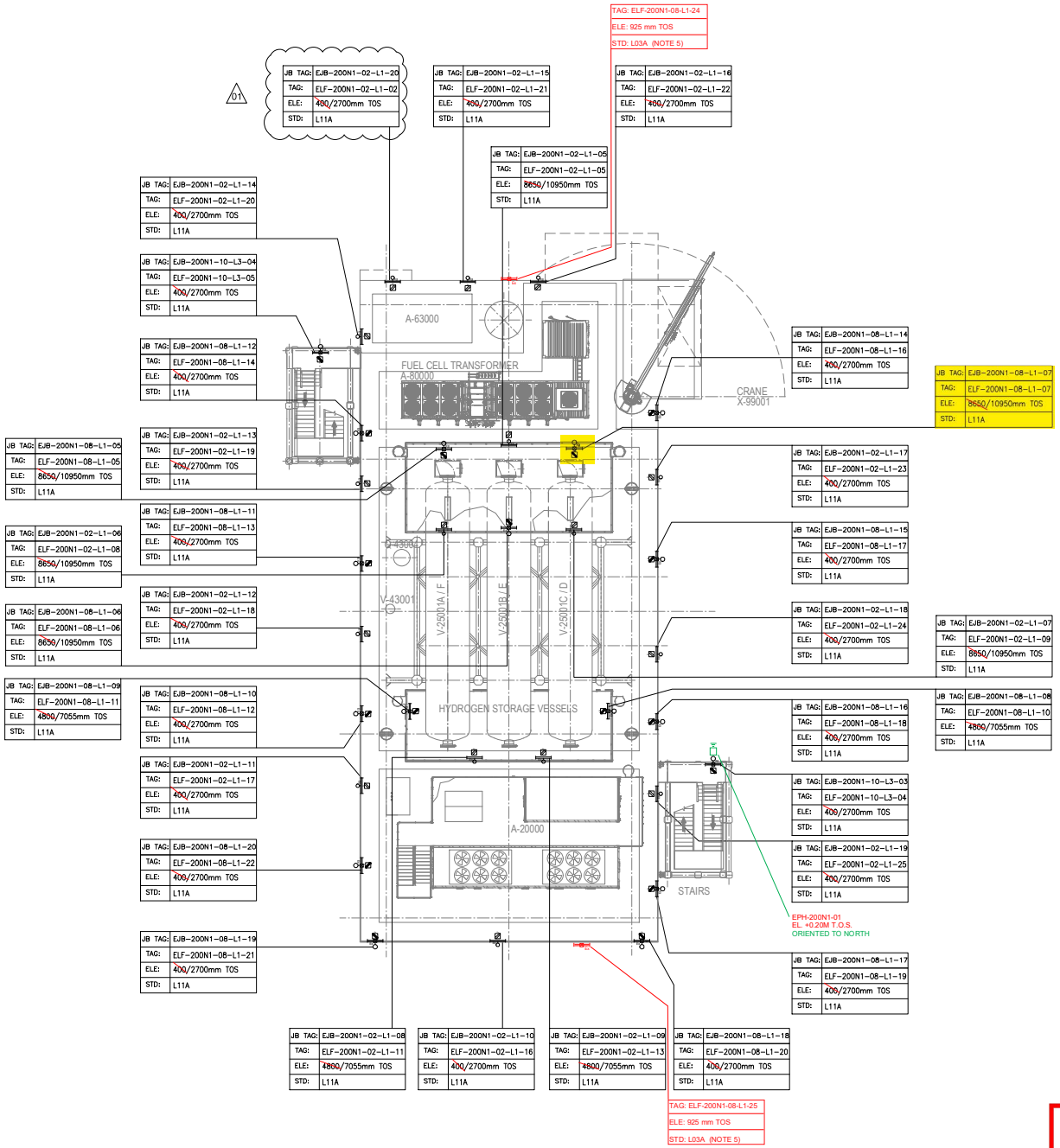
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

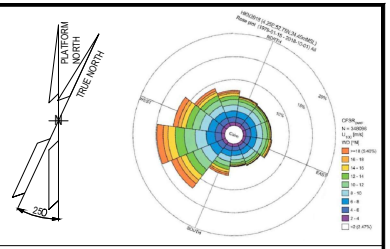
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-08	2025-01-14	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T09:58:11.180Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-14T16:36:19.016Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

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4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

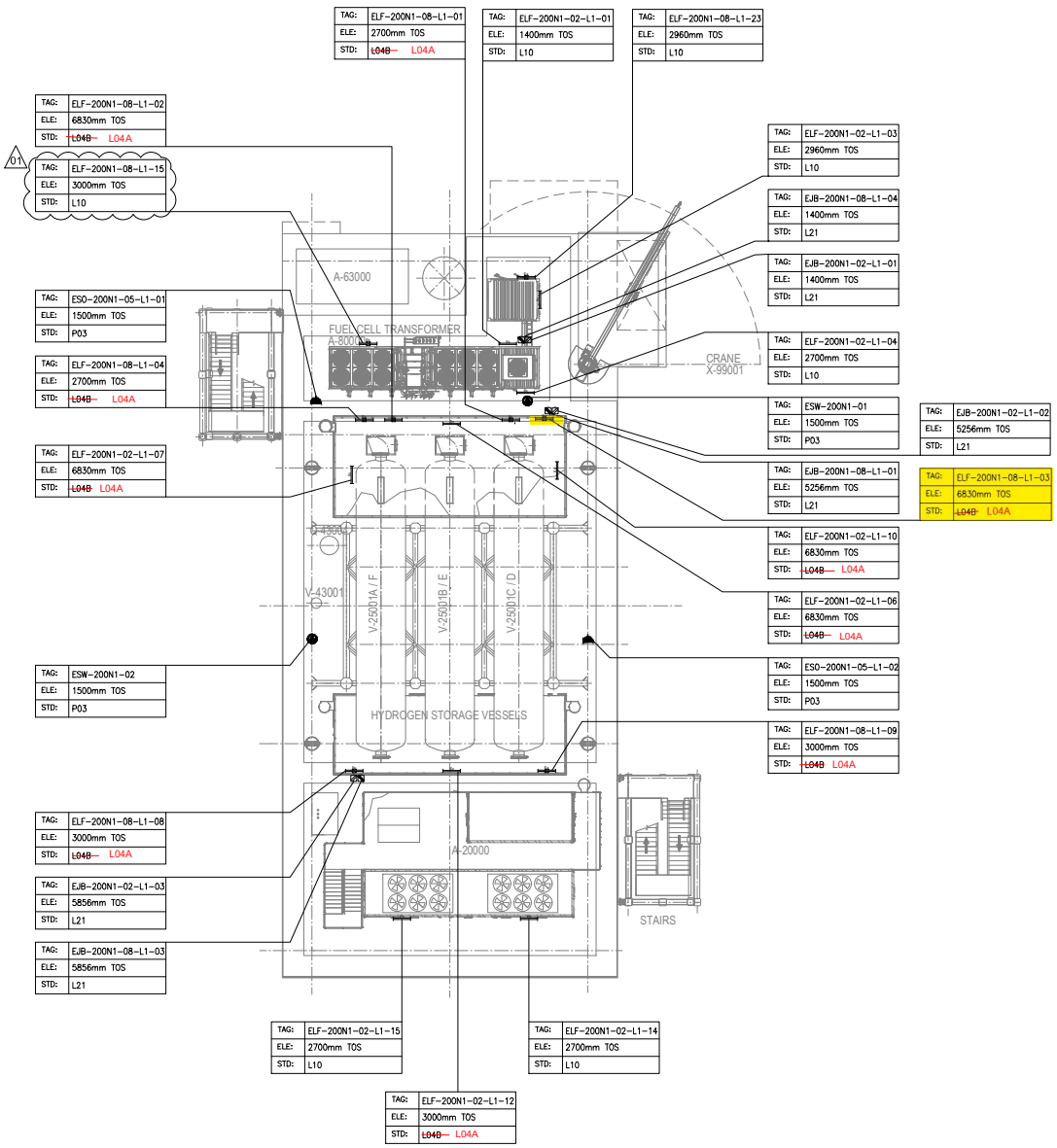
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

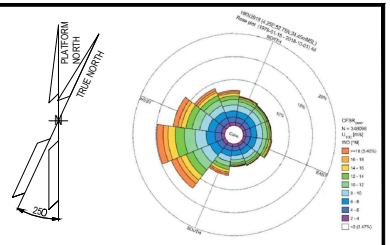
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DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



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- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

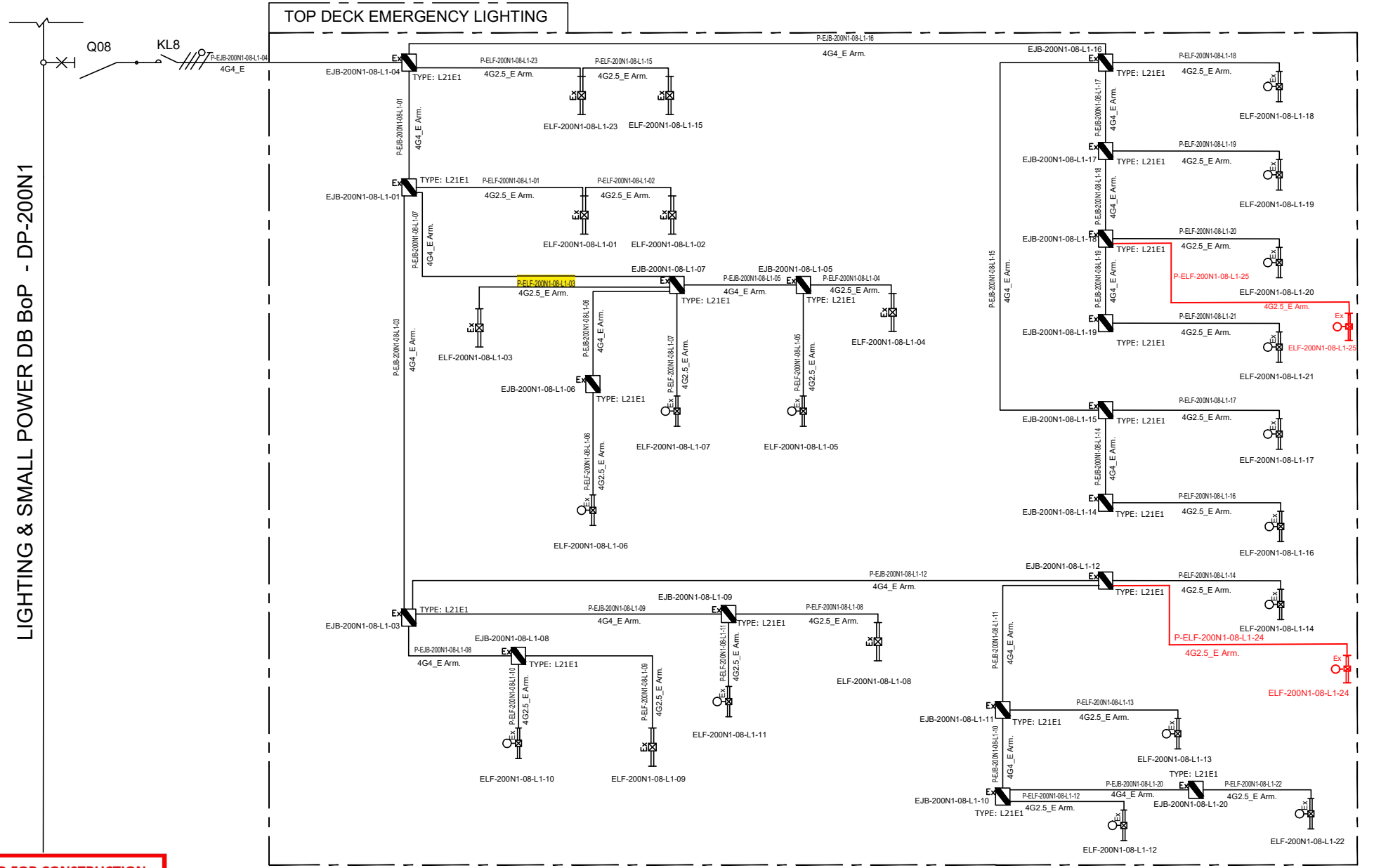
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

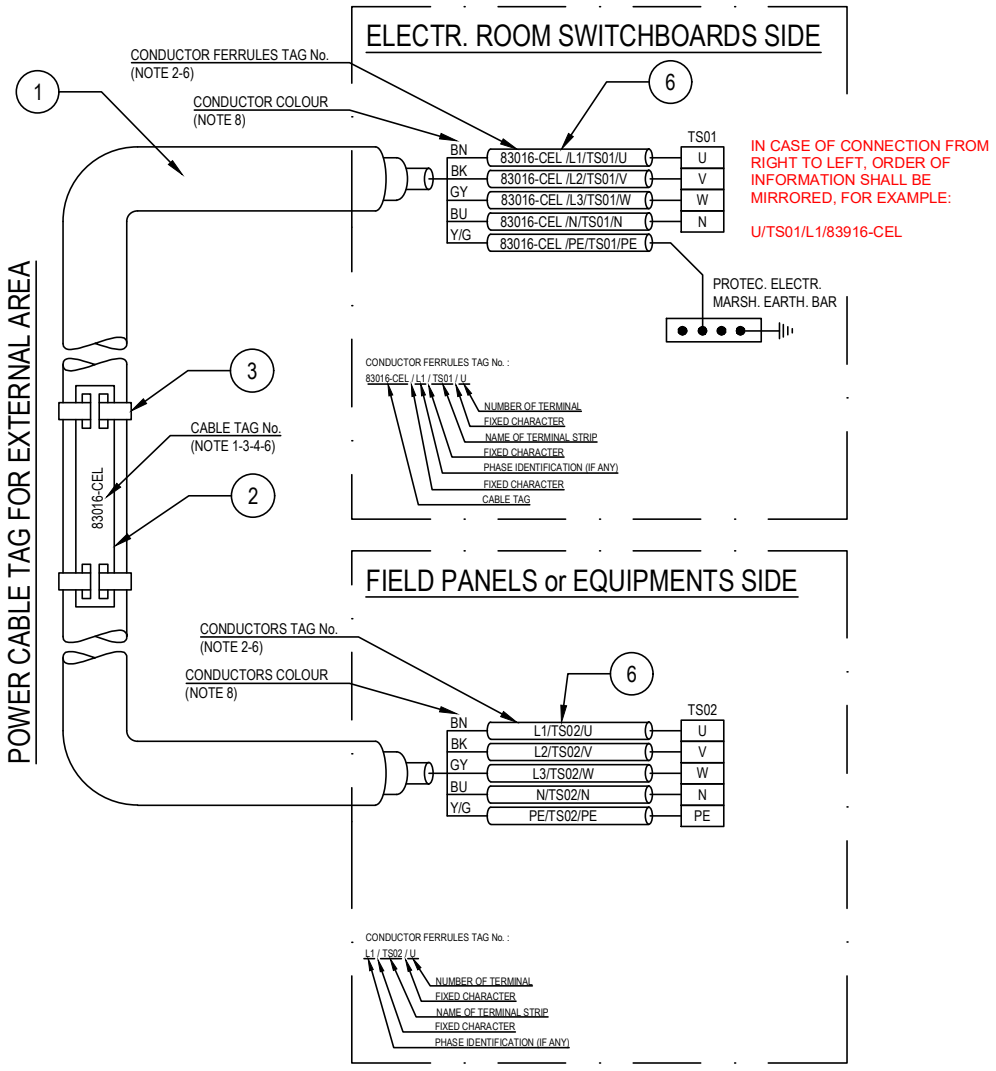
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

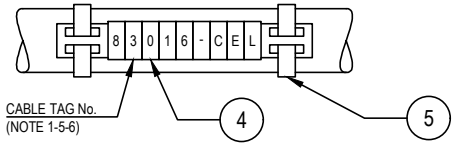
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

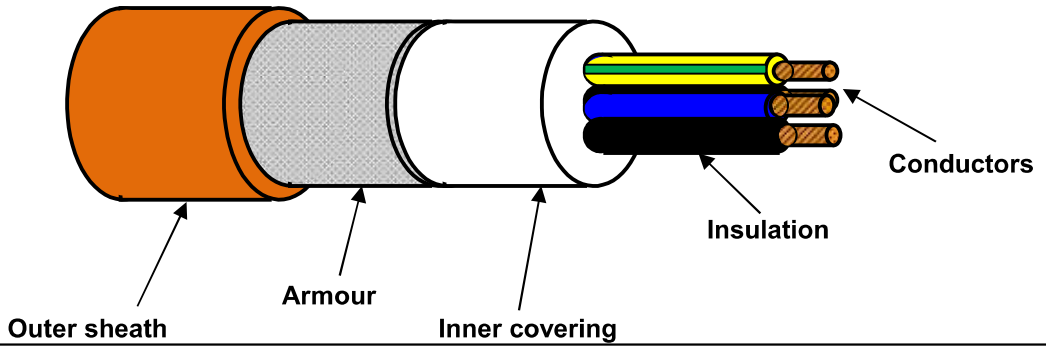
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-03	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-07	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-03	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-053 / L-150-102-LVT-011

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-ELF-200N1-08-L1-04	: Emergency Lighting Fixture / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000711		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-05 To ELF-200N1-08-L1-04

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-04	: Emergency Lighting Fixture / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000711		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

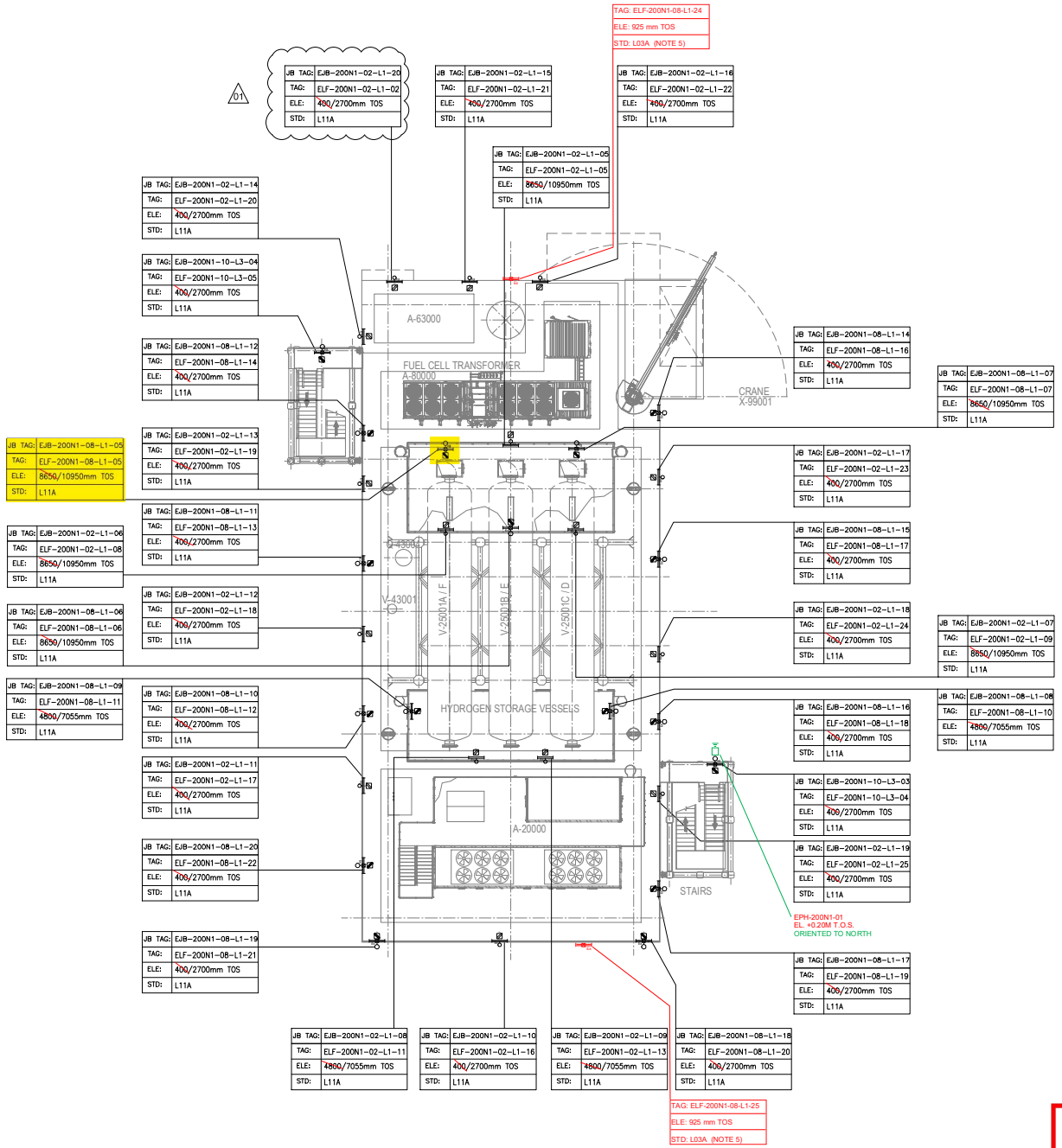
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

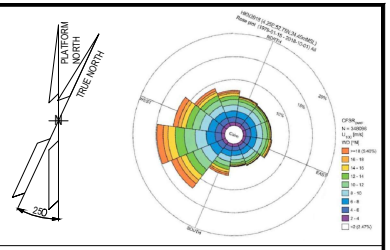
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-10	2025-01-14	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:09:00.298Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-14T16:38:33.933Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

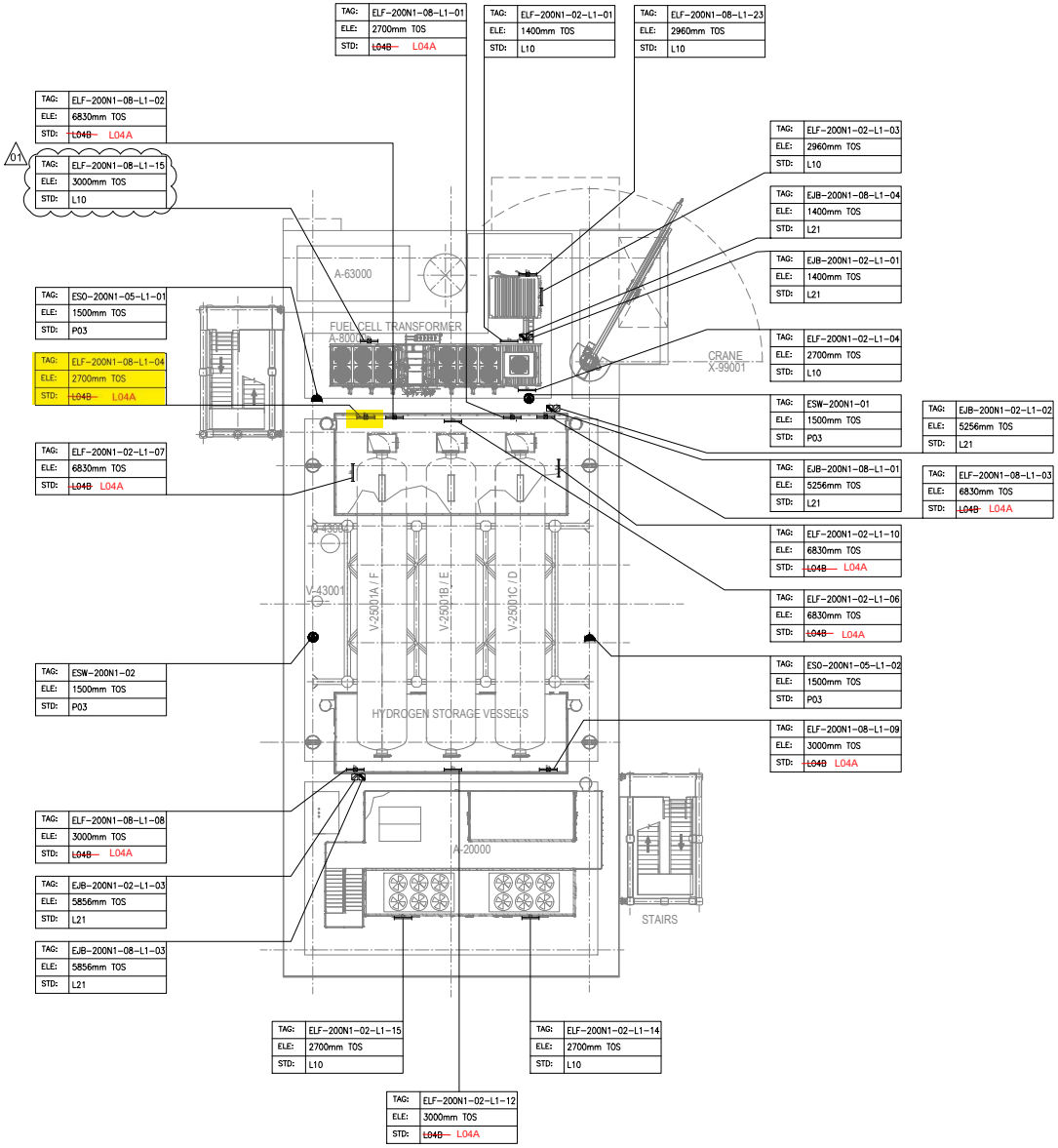
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

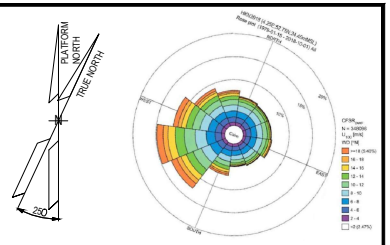
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DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
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LEGEND

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- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

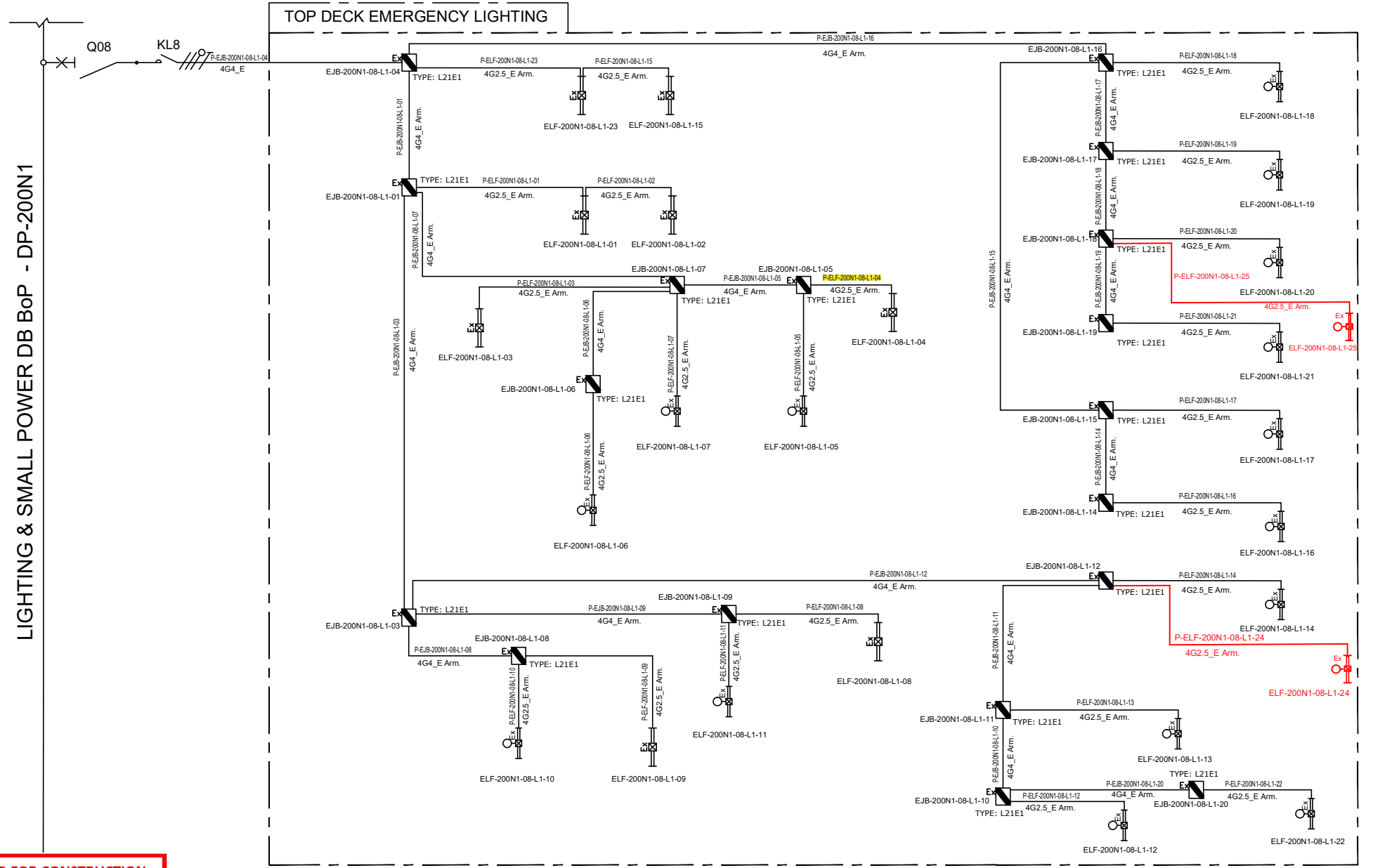
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

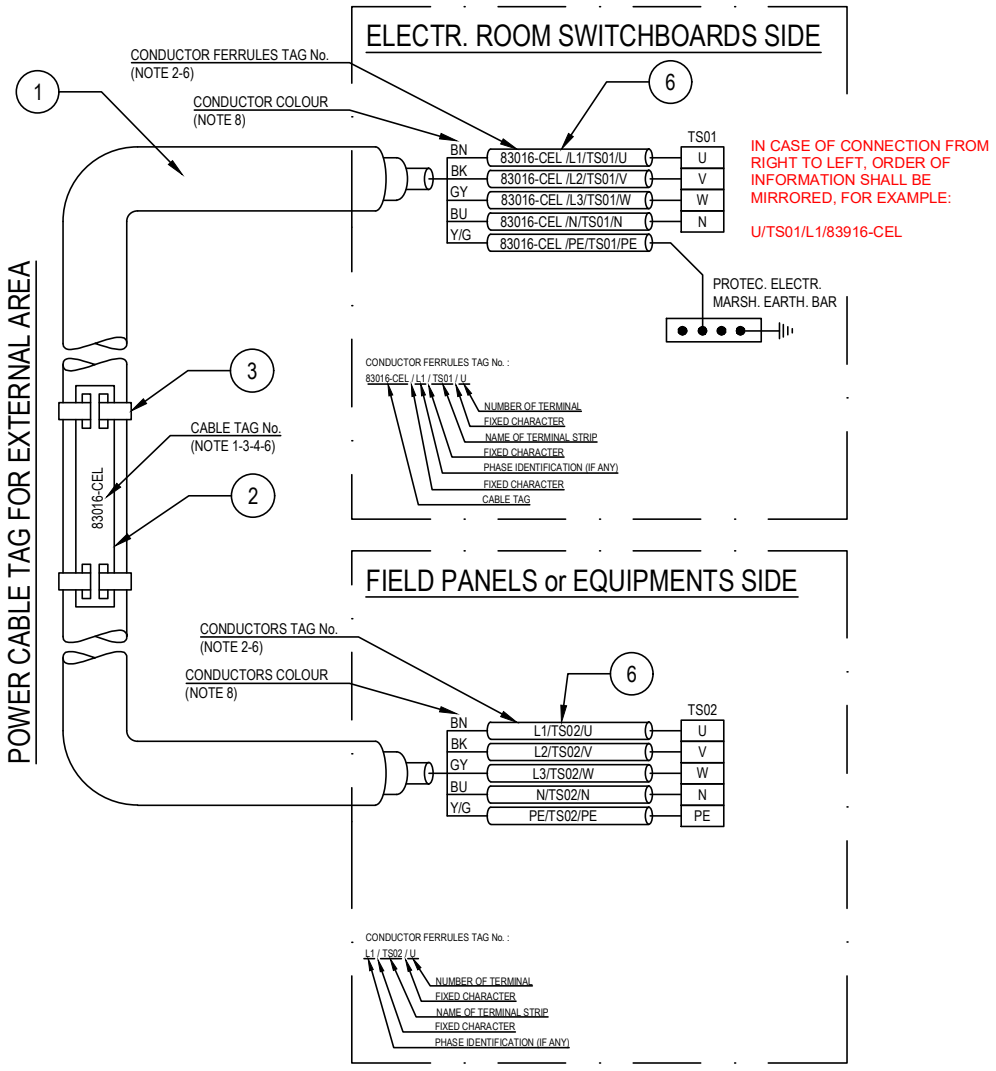
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
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3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
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5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
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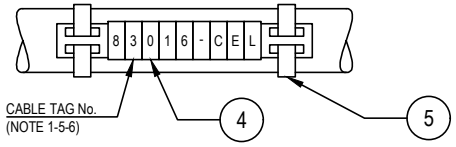
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- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

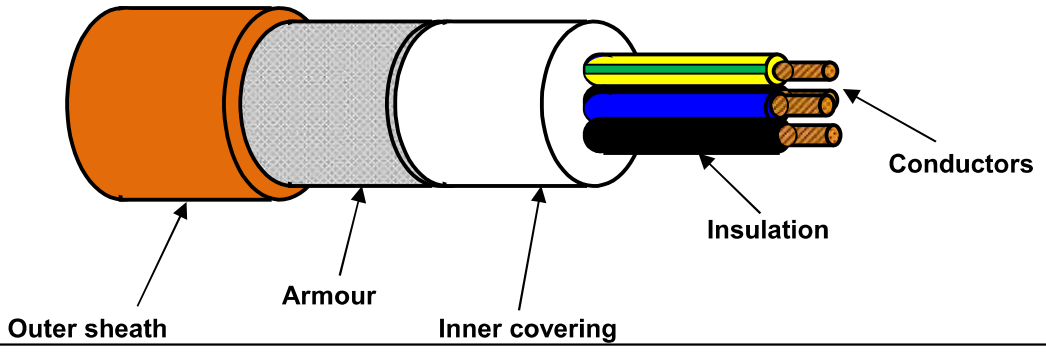
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-04	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-05	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-04	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-055 / L-150-102-LVT-011

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-05	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000712		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type: Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm²: 4G4_E mm2 Color: ORANGE

From: EJB-200N1-08-L1-07 To: EJB-200N1-08-L1-05

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-05	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000712		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

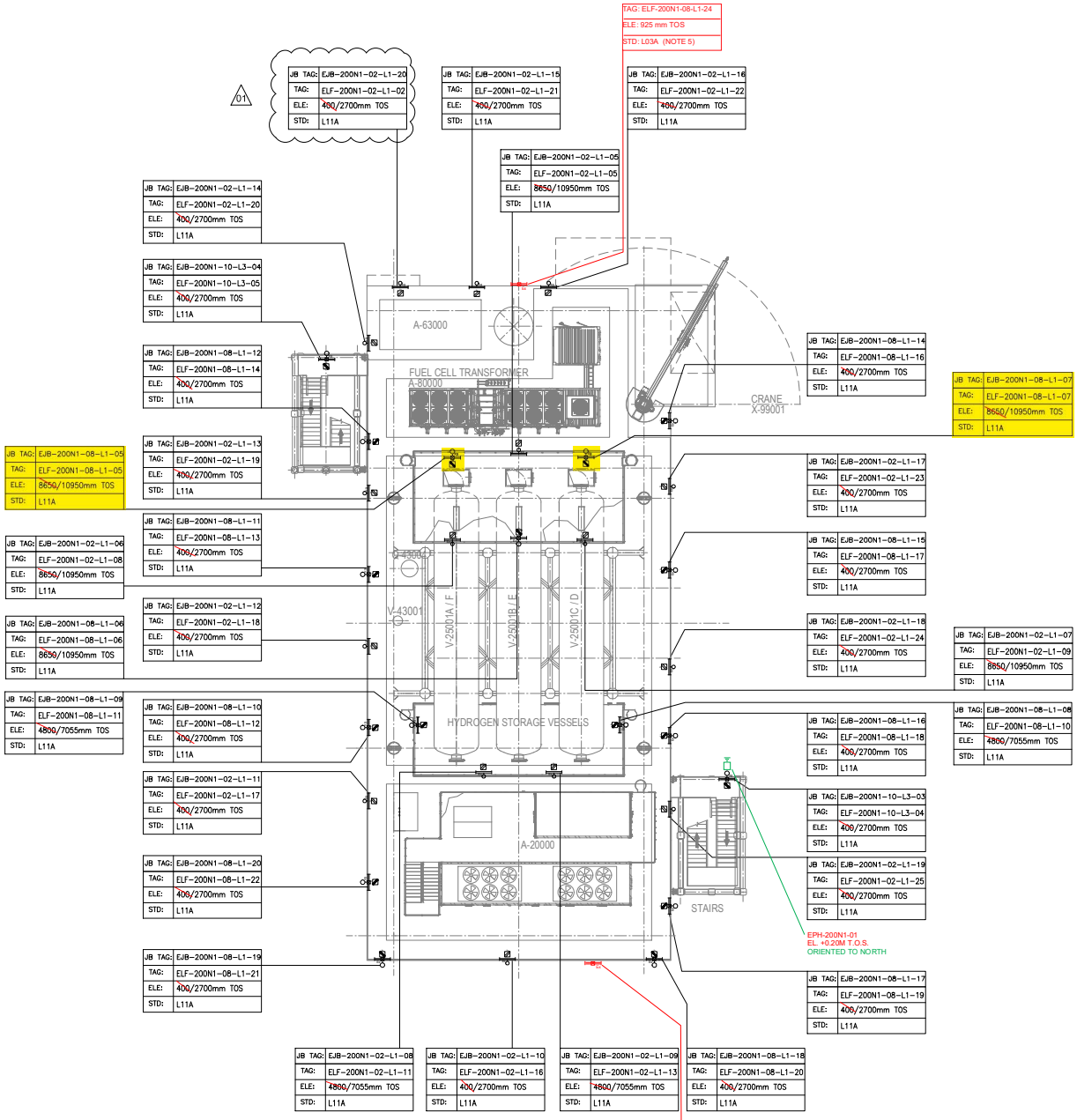
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

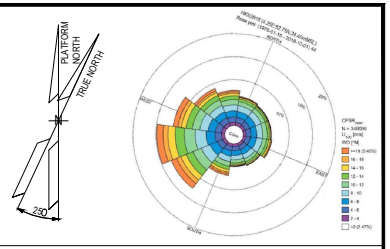
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:09:13.112Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-16T18:28:34.614Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

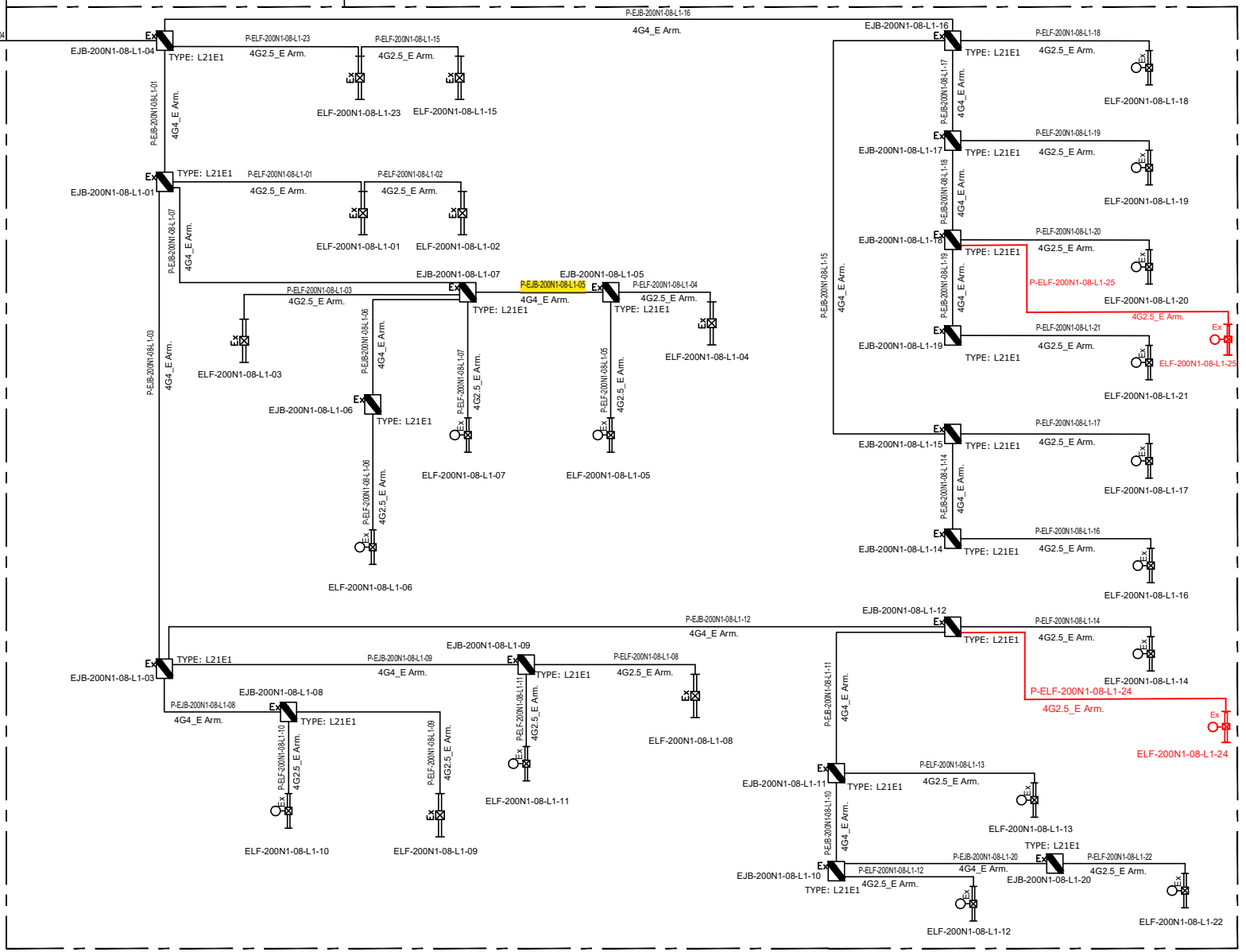
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DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

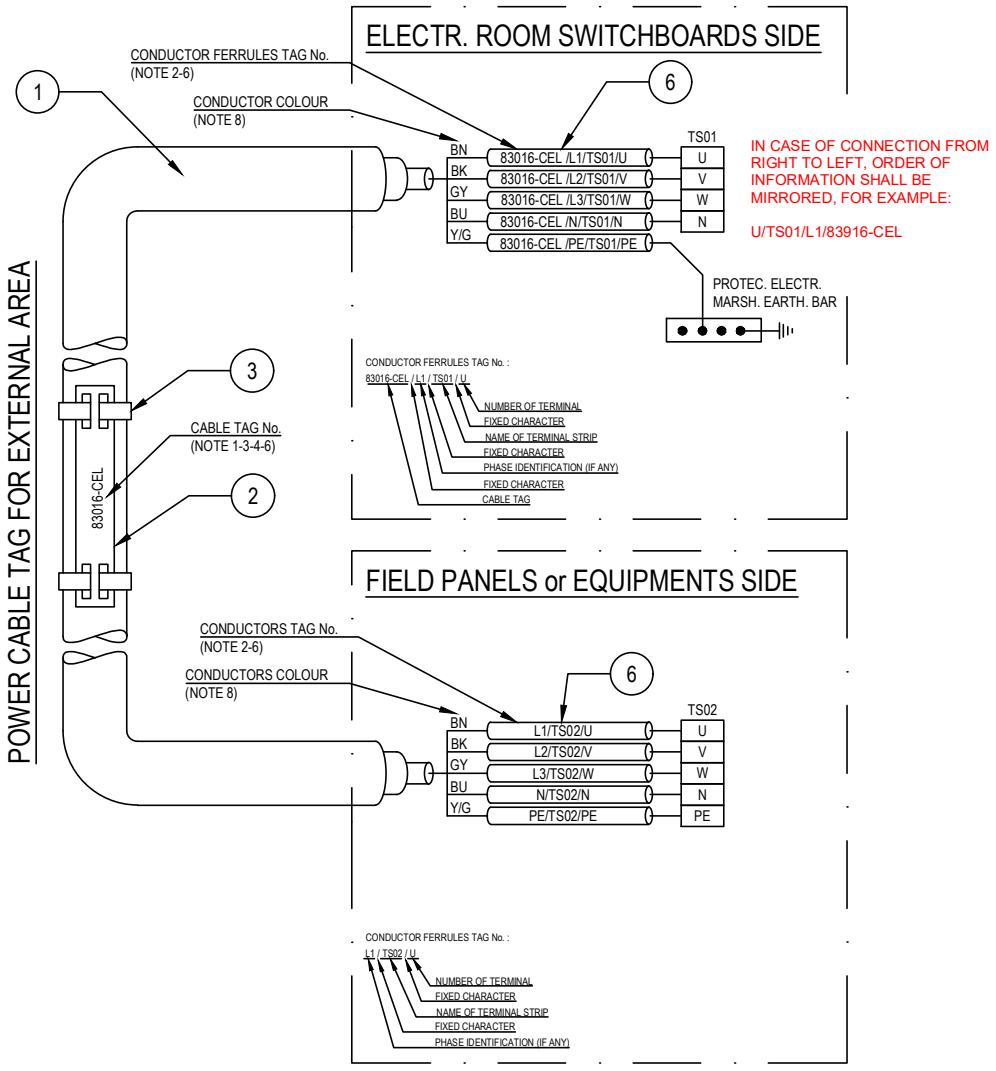
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

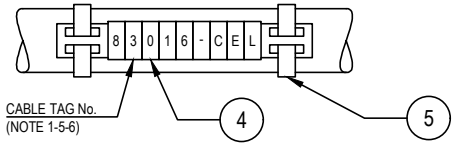
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

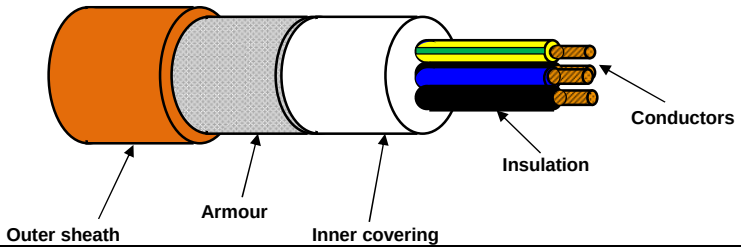
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-05	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-07	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-05	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-50-102-LVT-053 / L-150-102-LVT-011 / L-50-102-LVT-055

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-05	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000713		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-05 To ELF-200N1-08-L1-05

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	PL
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-05	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000713		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,08	
6		PH 2	0,08	
7		PH 3	0,08	
8	ARMOUR CONTINUITY Ω		0,08	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,08	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

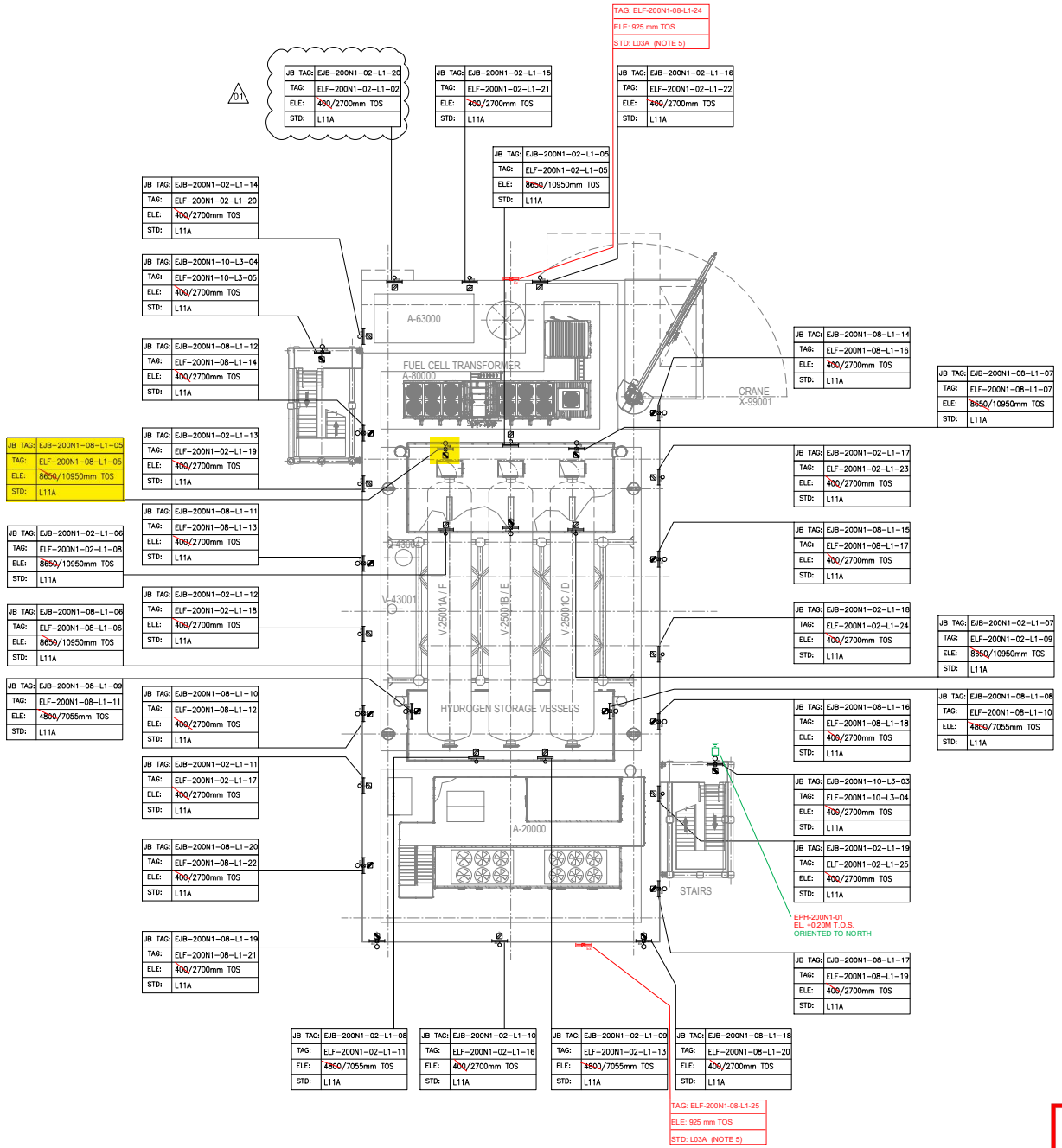
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

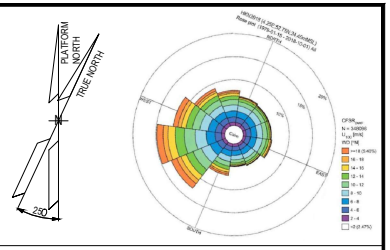
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-13	2025-01-14	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T08:58:49.366Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-14T17:06:38.623Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

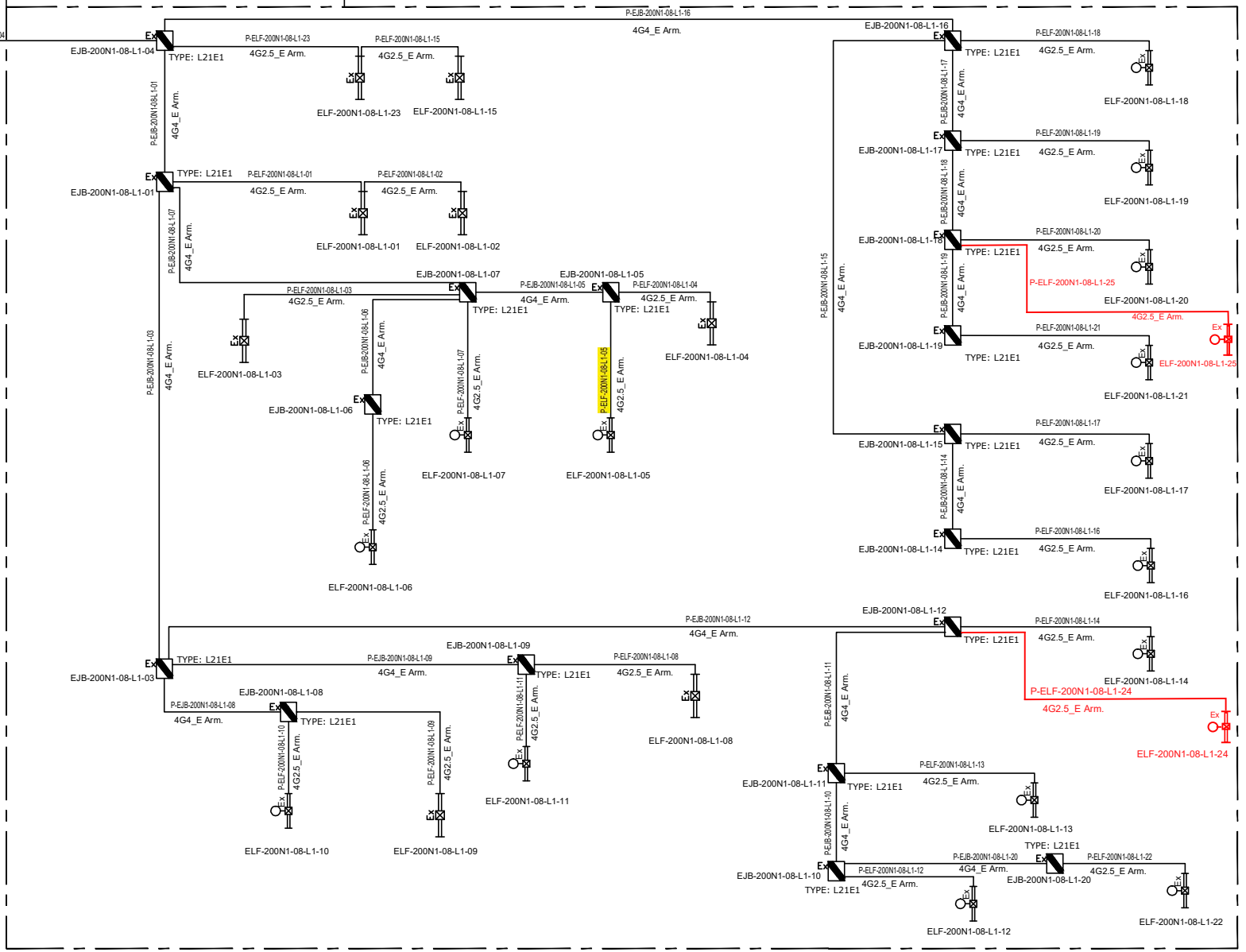
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
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A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

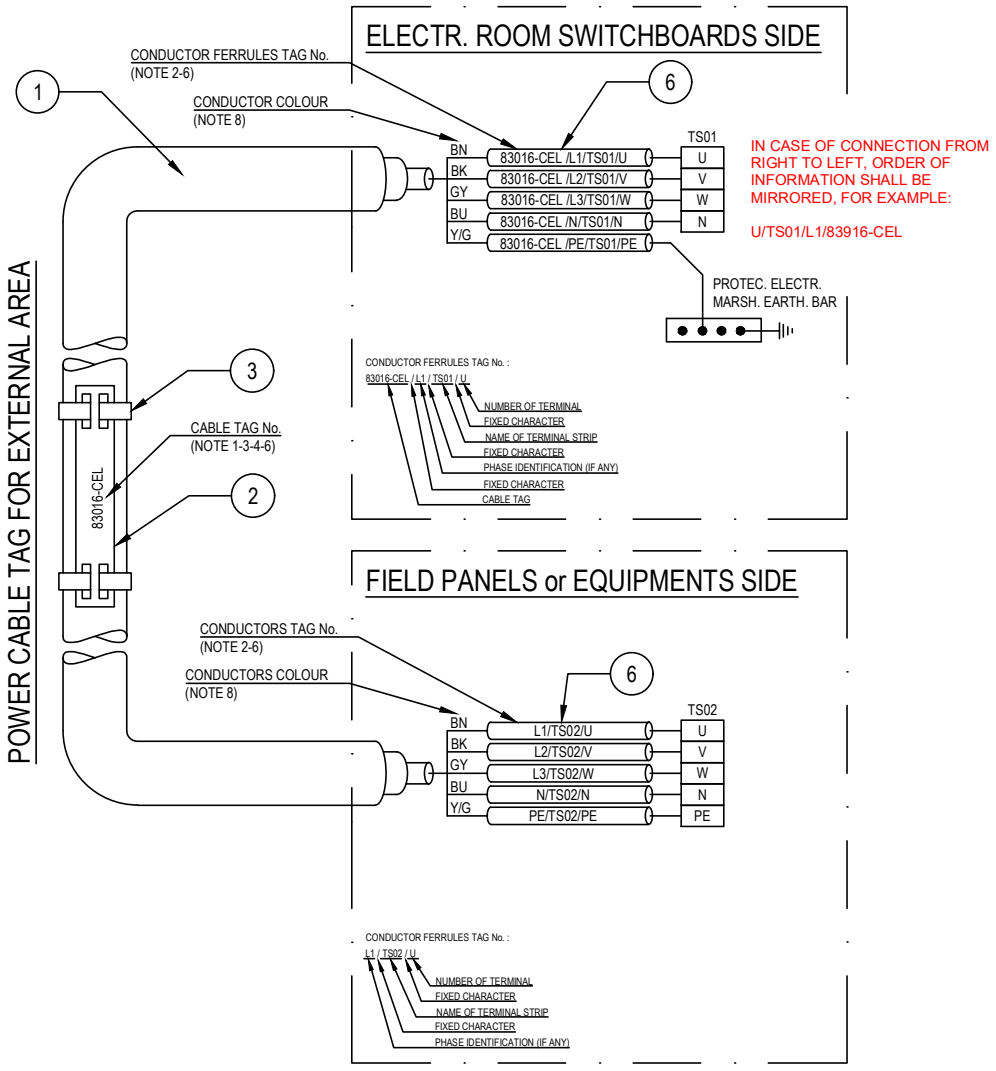
SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DG–20125	011	01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

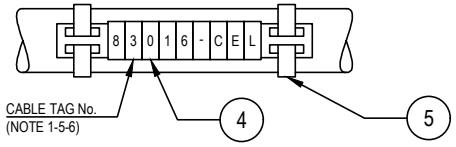
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

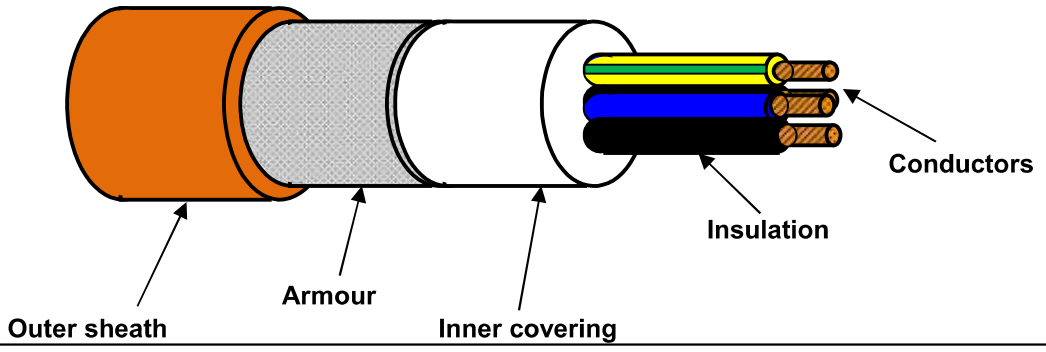
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-05	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-05	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-05	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-044

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-EJB-200N1-08-L1-06	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000714		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-07 To EJB-200N1-08-L1-06

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-06	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000714		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,6	
6		PH 2	0,6	
7		PH 3	0,6	
8	ARMOUR CONTINUITY Ω		0,6	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,6	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

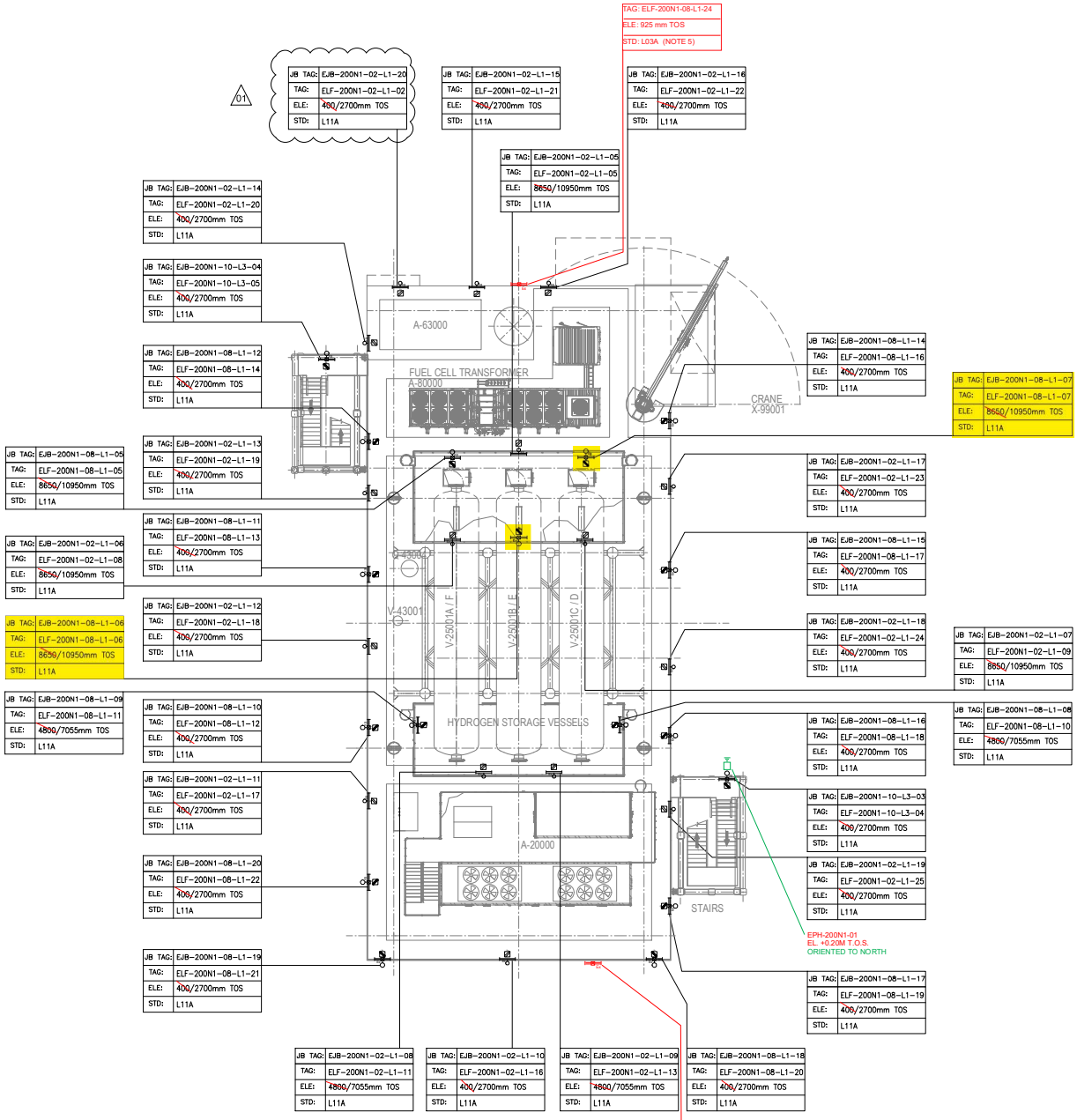
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

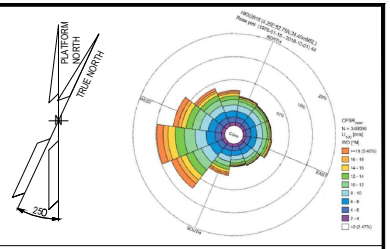
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-13	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T08:59:01.989Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-16T18:29:36.508Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
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4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

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- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

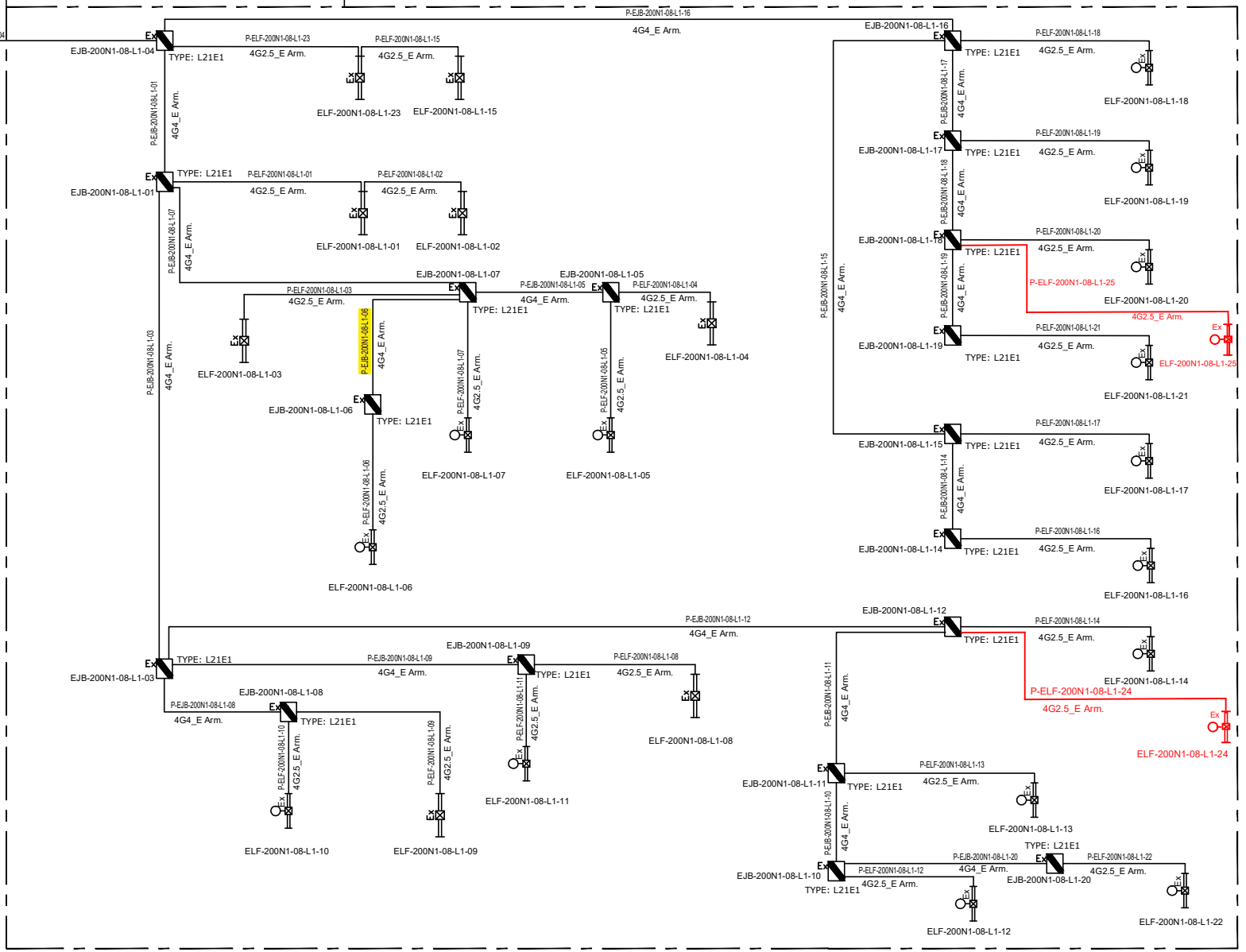
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

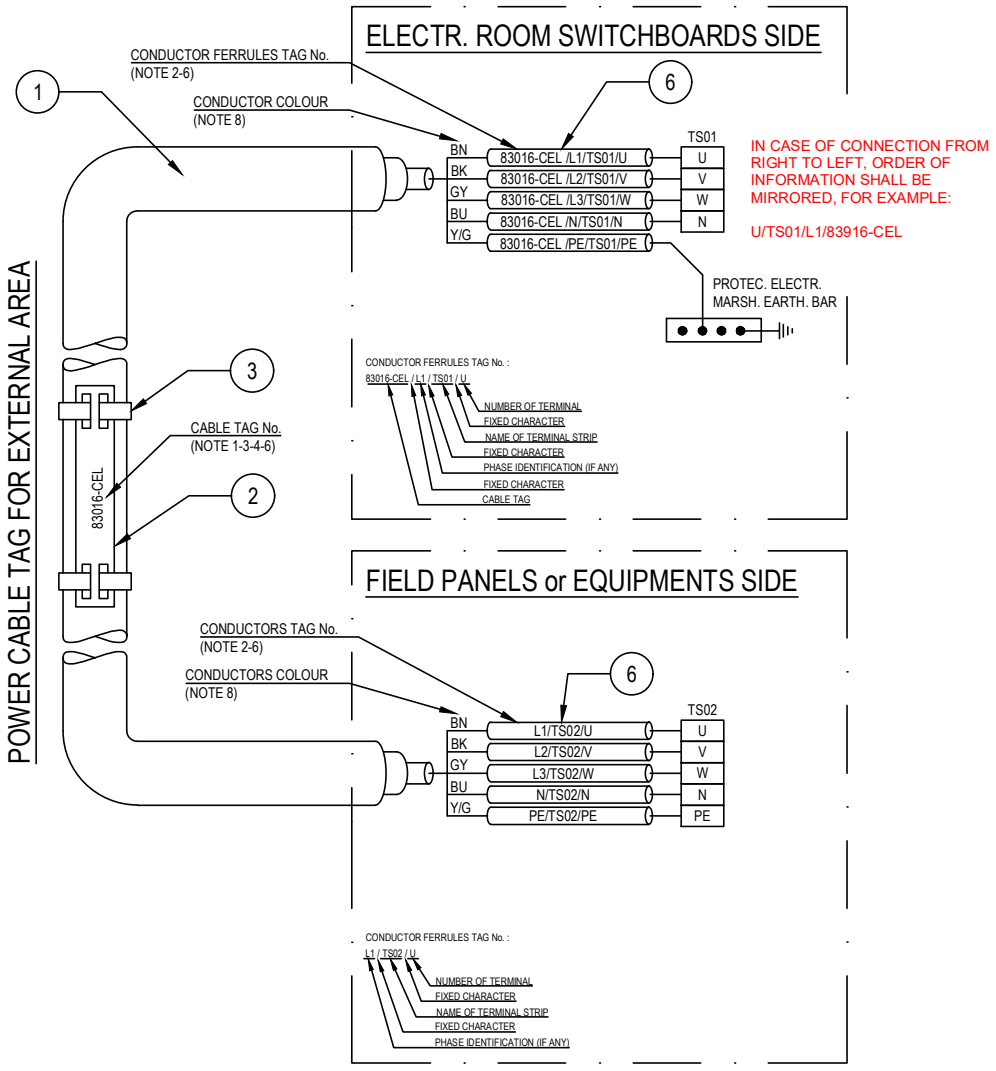
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
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5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

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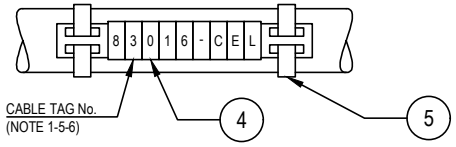
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- EARTH BAR AND EARTH BOSS

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POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

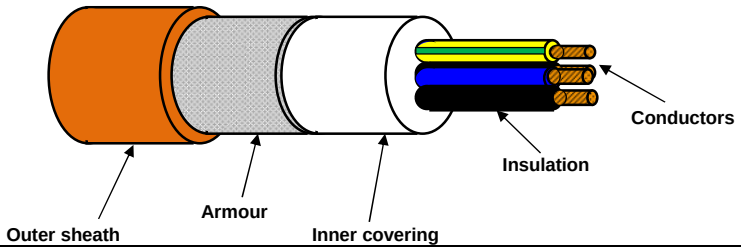
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-06	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-07	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-06	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-50-102-LVT-053 / L-150-102-LVT-011 / L-300-102-LVT-009 / L-150-102-LVT-012

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-06	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000715		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-06 To ELF-200N1-08-L1-06

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-06	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000715		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,08	
6		PH 2	0,08	
7		PH 3	0,08	
8	ARMOUR CONTINUITY Ω		0,08	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,08	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

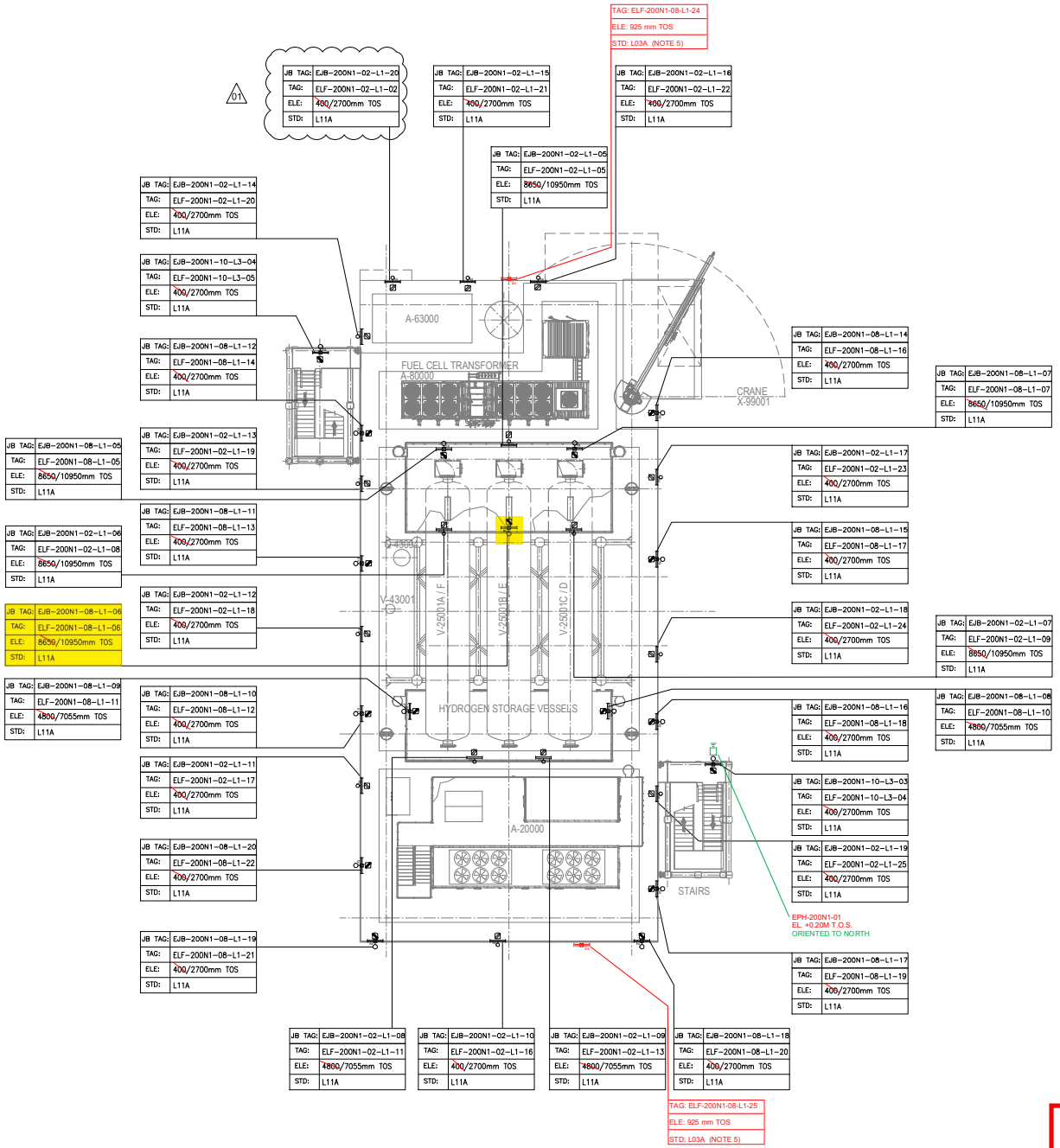
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

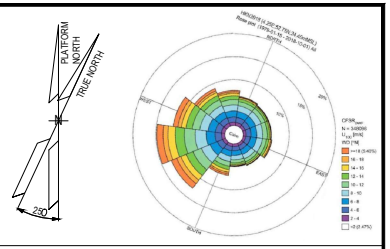
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-13	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T08:59:17.146Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-15T16:03:53.888Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

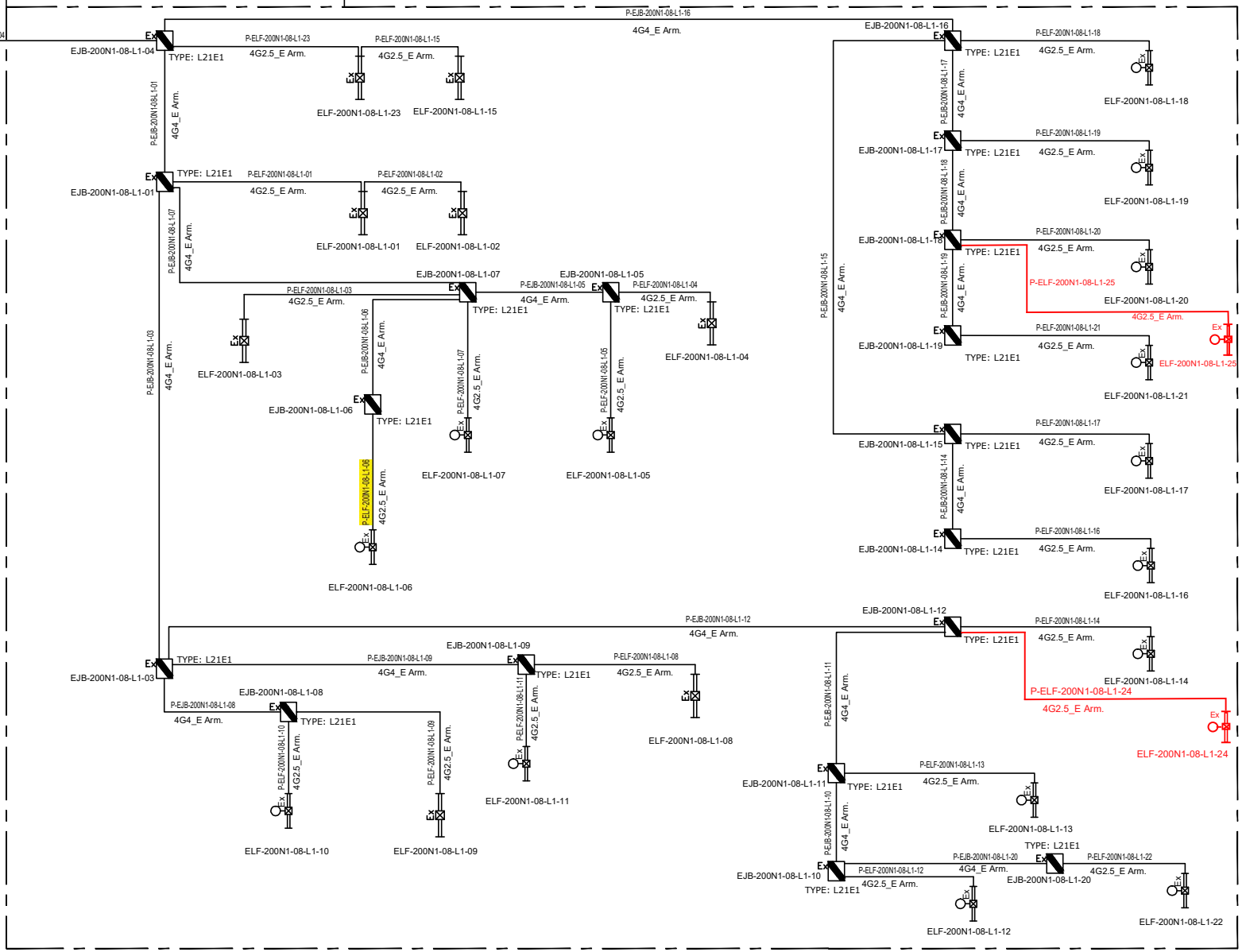
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

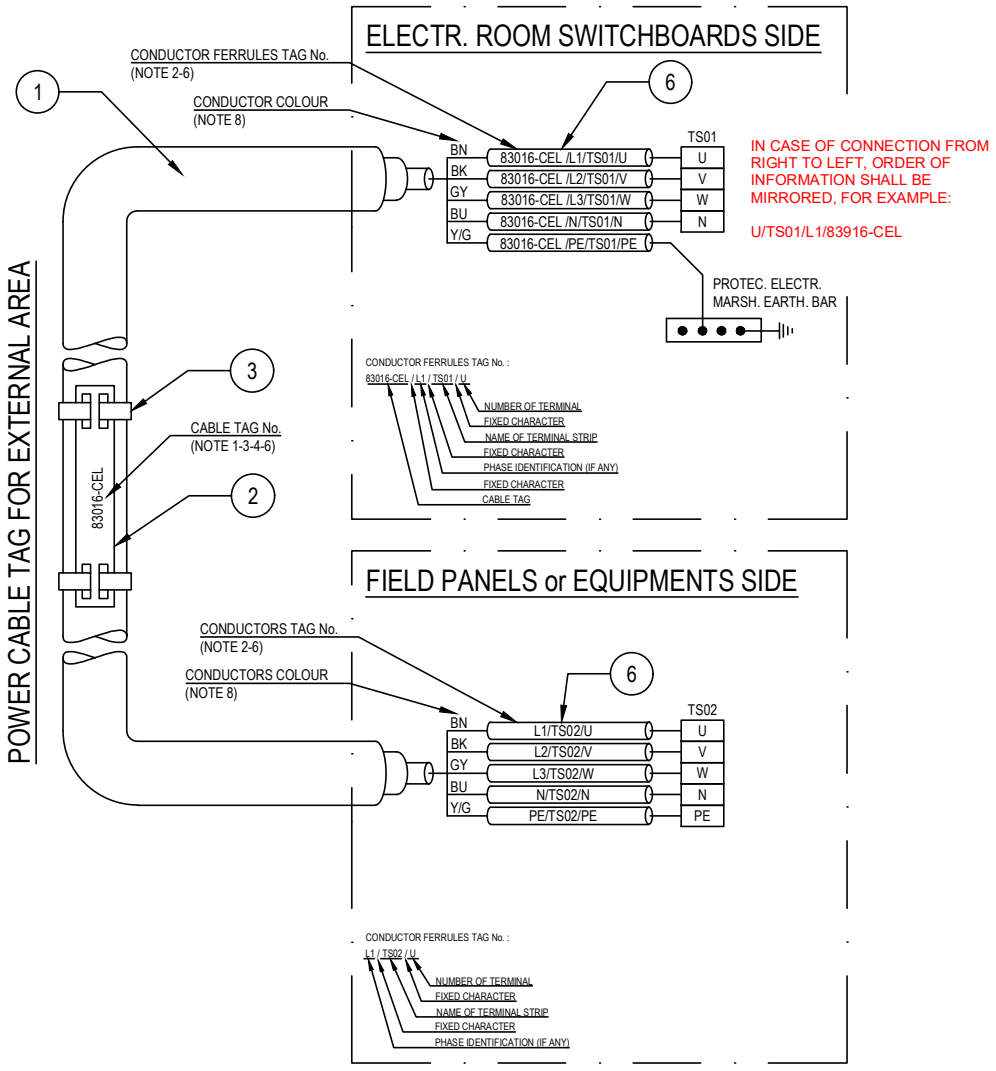
SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DG–20125	011	01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

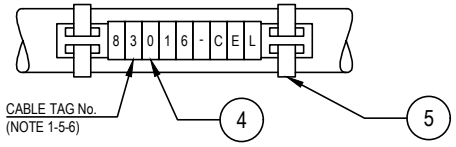
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

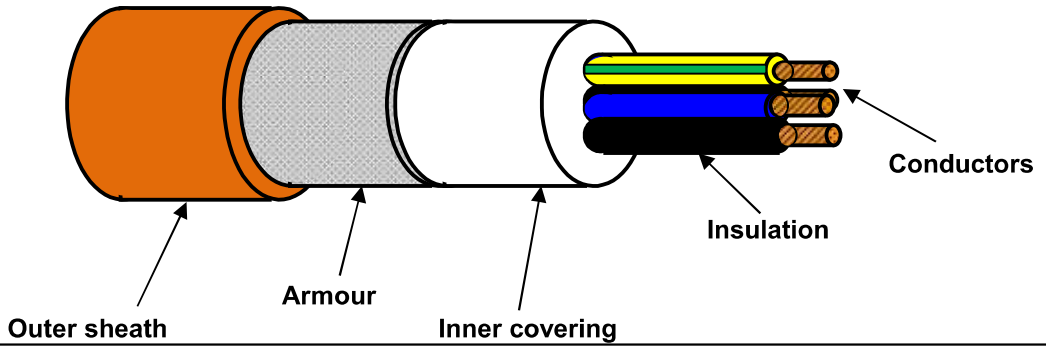
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-06	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-06	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-06	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-049

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-07	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000716		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-01 To EJB-200N1-08-L1-07

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ITEM	Tag	P-EJB-200N1-08-L1-07	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000716		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

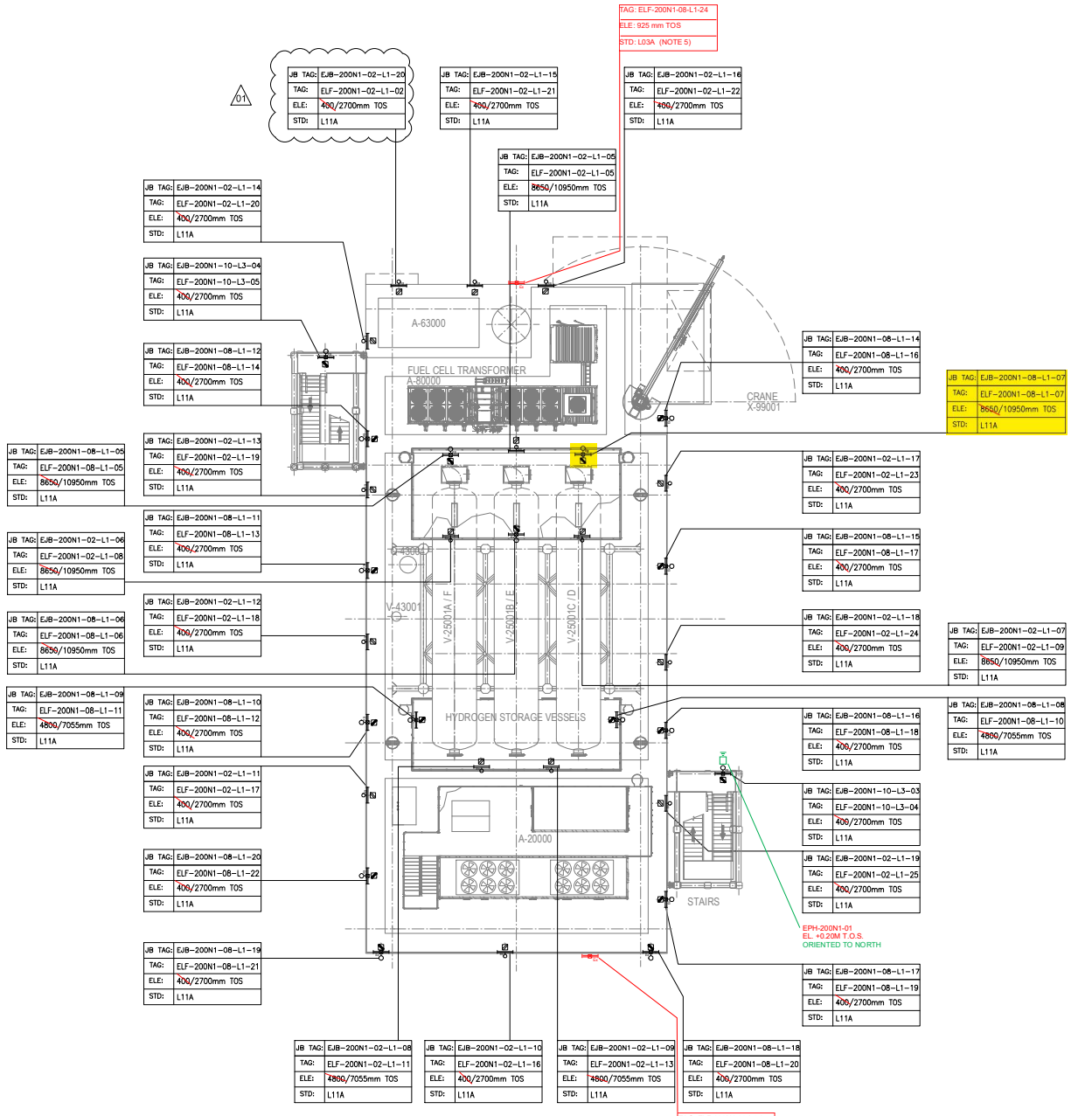
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:09:44.678Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-16T18:32:25.623Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01

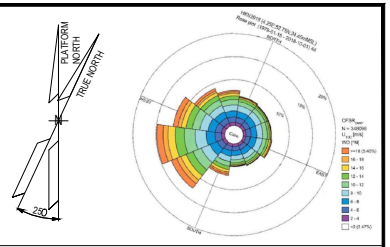


PLAN ON UPPER DECK
EL+30.310 T.O.S.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA



NOTES

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3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

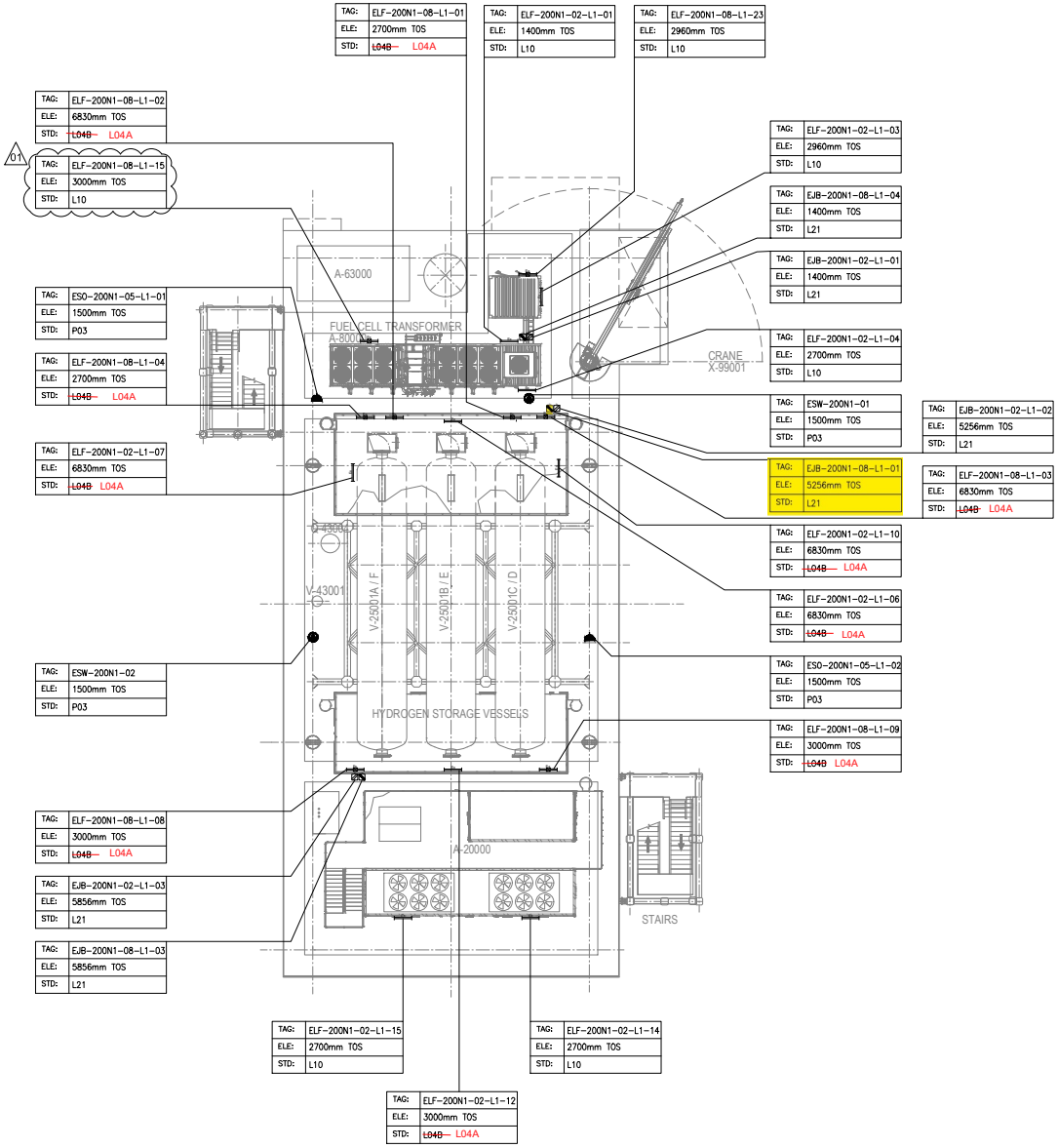
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

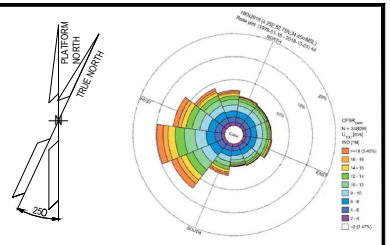
File Name : 123A90-DDL-EL-DL-20118

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



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00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

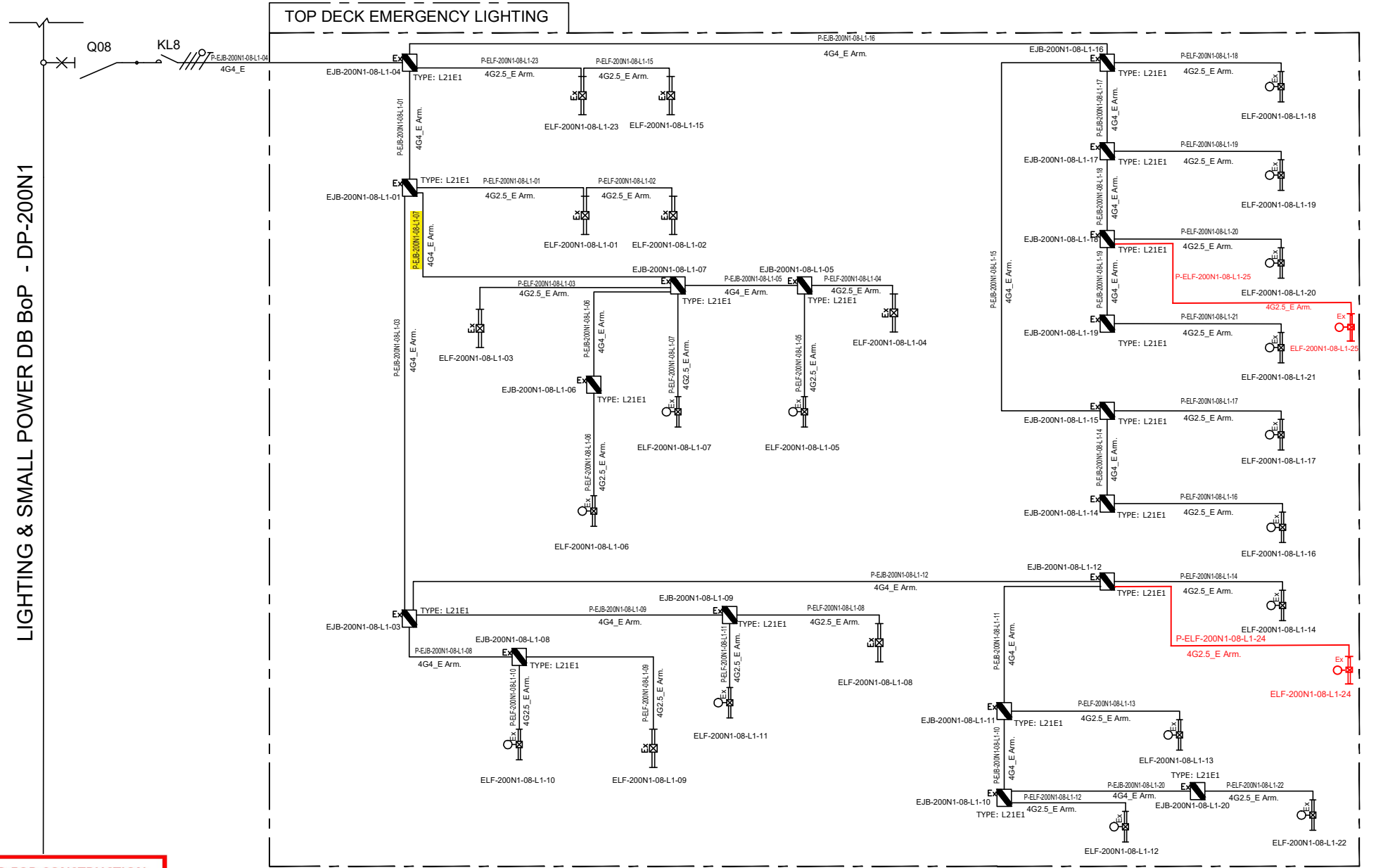
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

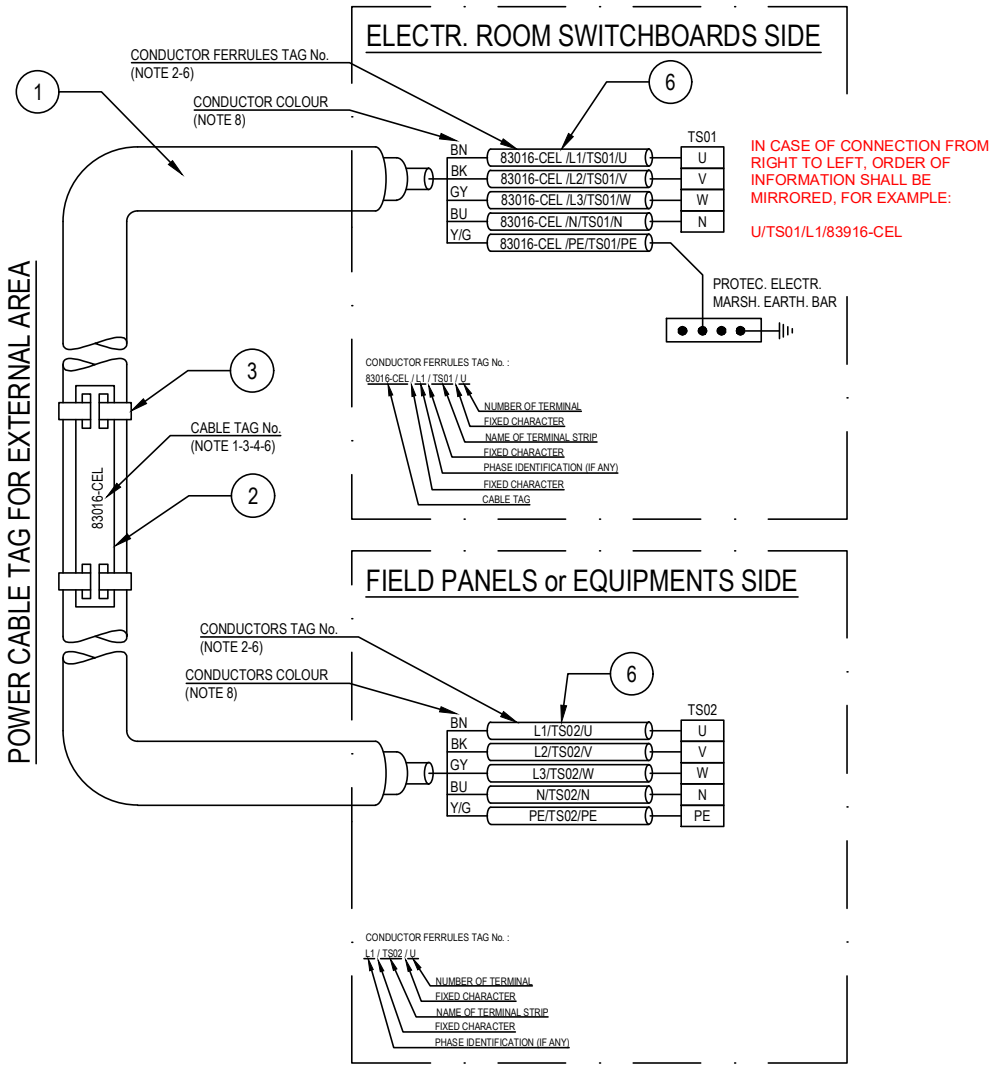
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

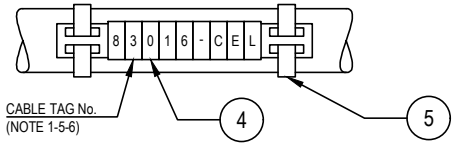
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

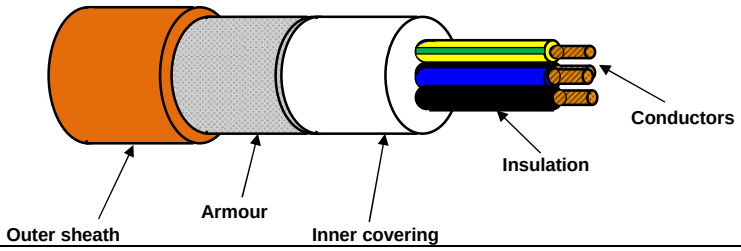
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-07	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-01	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-07	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-014 / L-150-102-LVT-010 / L-300-102-LVT-009 / L-150-102-LVT-011 / L-50-102-LVT-053

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-ELF-200N1-08-L1-07	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000717		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-07 To ELF-200N1-08-L1-07

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	PL
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO — PROVERLIS — CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-07	: Emergency Lighting JB / Emergency Lighting Fixture		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10000717	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX09	LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,08	
6		PH 2	0,08	
7		PH 3	0,08	
8	ARMOUR CONTINUITY Ω		0,08	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,08	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

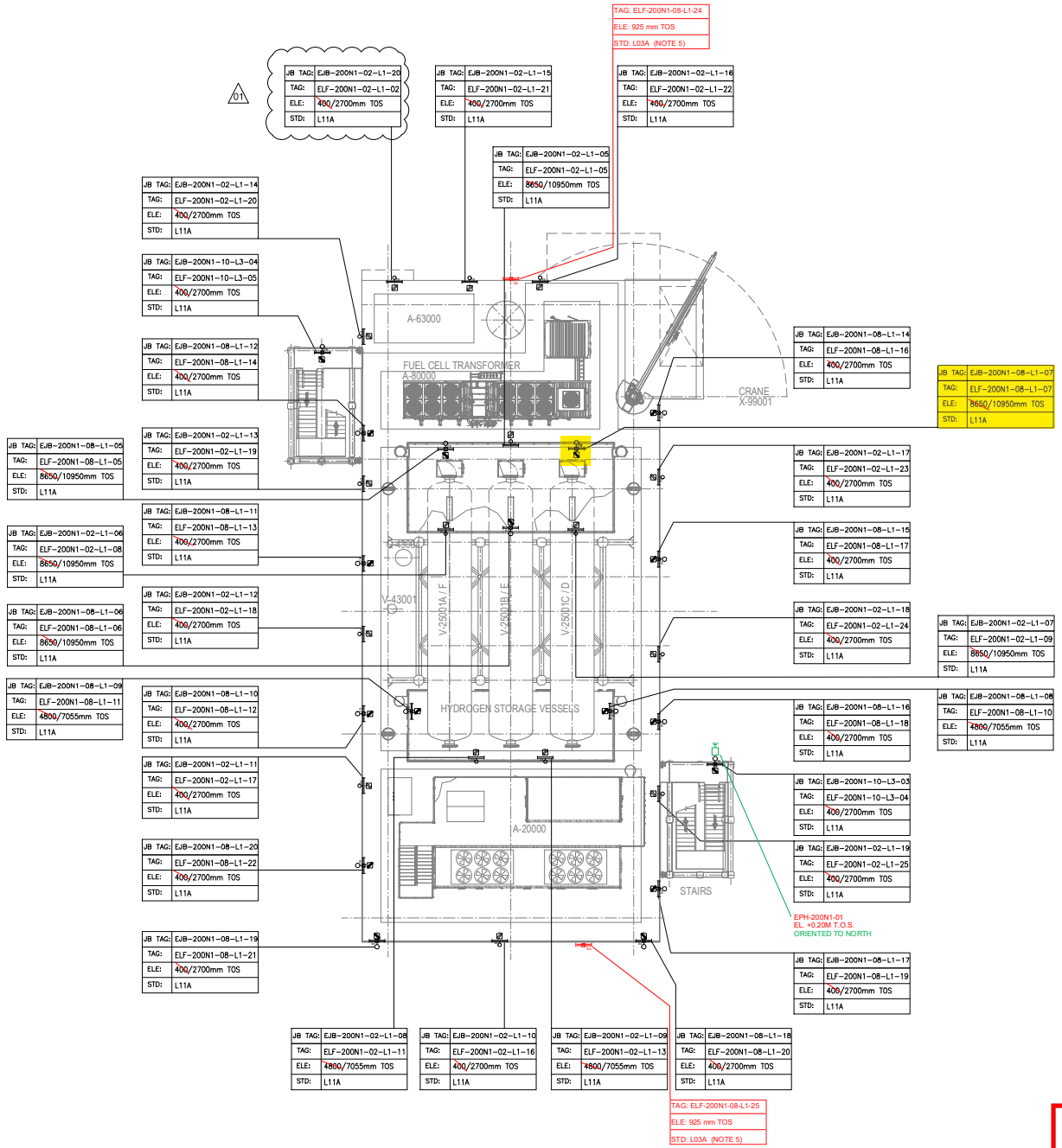
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-13	2025-01-14	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T08:59:33.321Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-14T17:16:13.668Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01

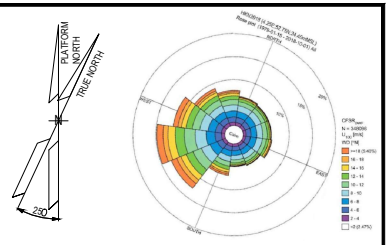


PLAN ON UPPER DECK
EL+30.310 T.O.S.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

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123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
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00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

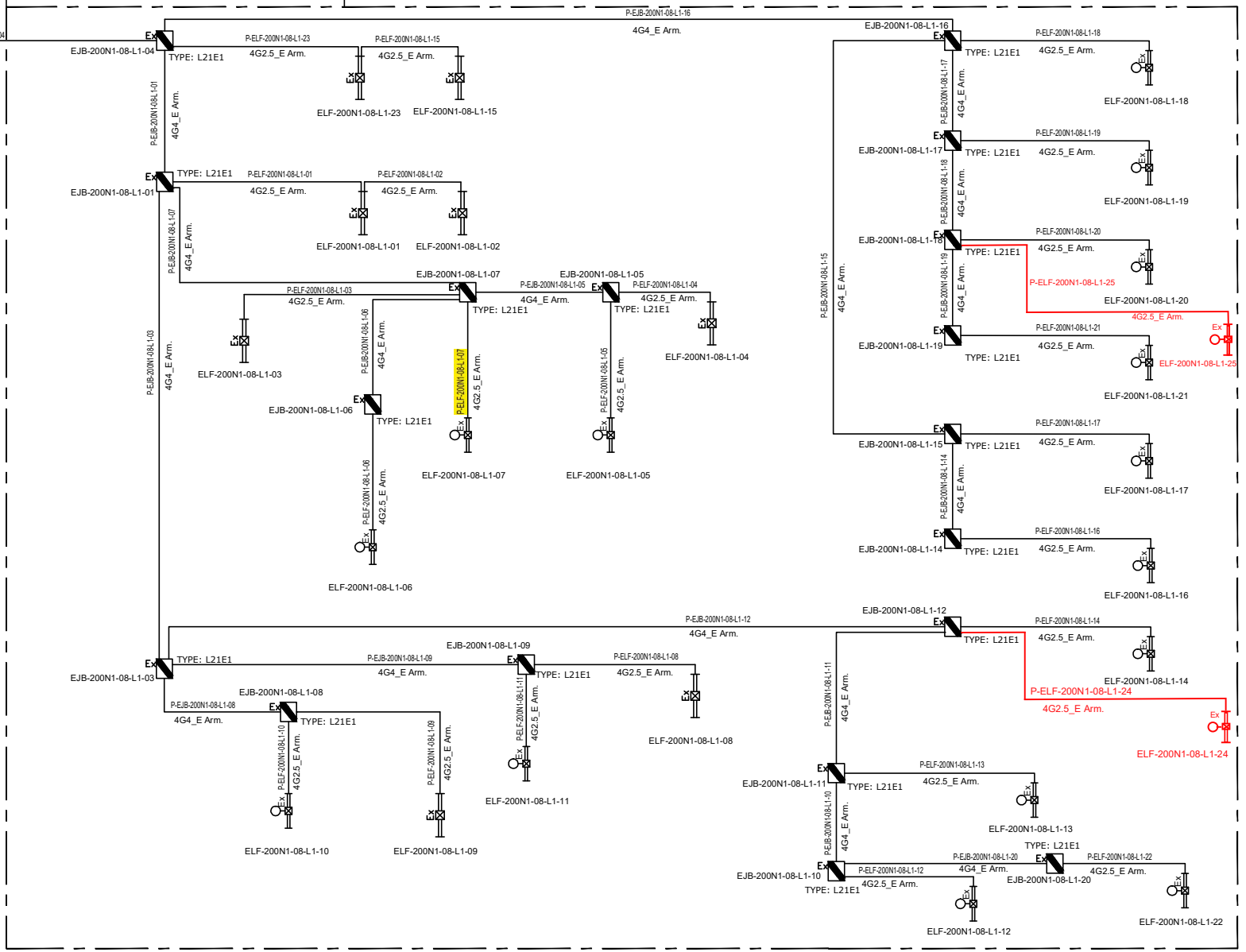
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

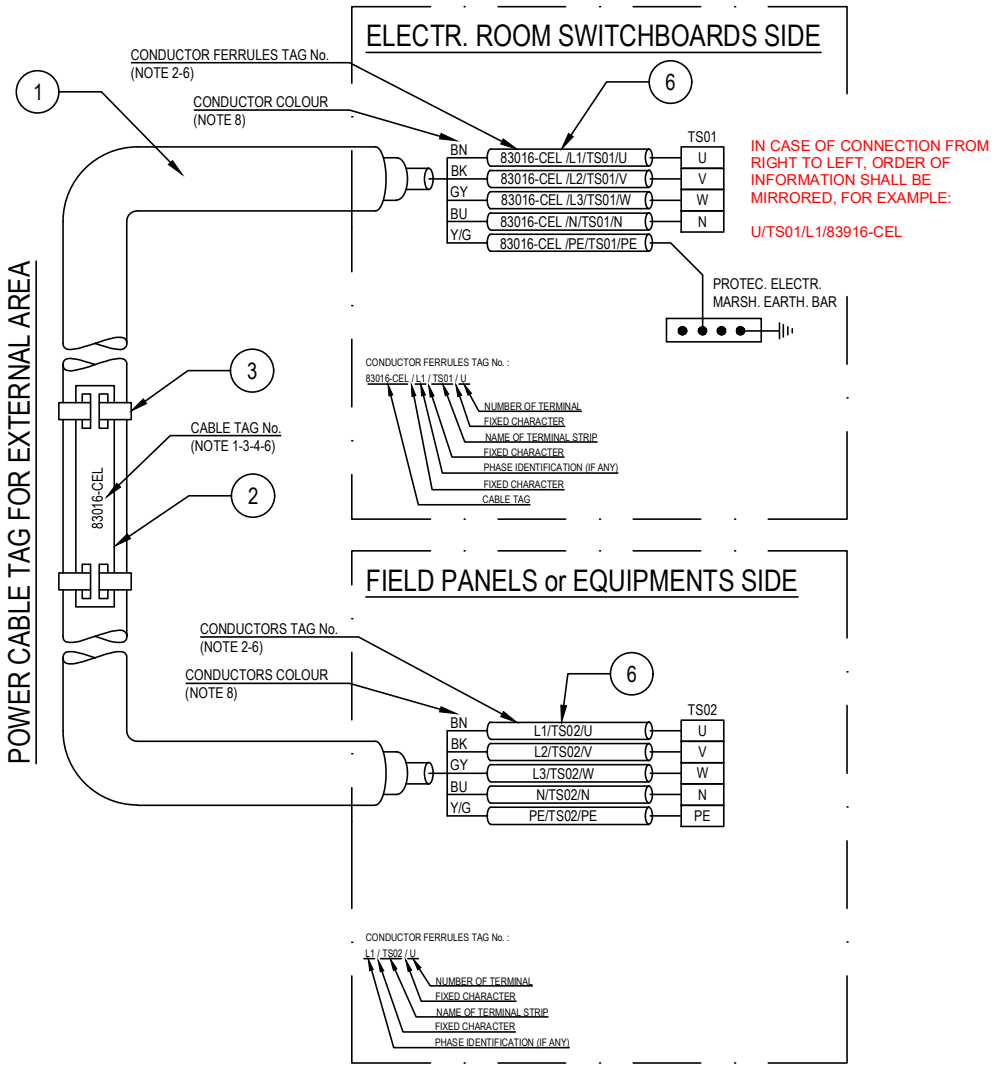
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

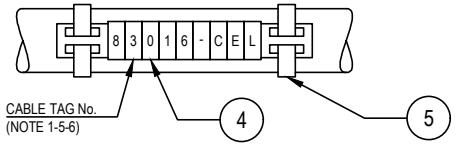
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

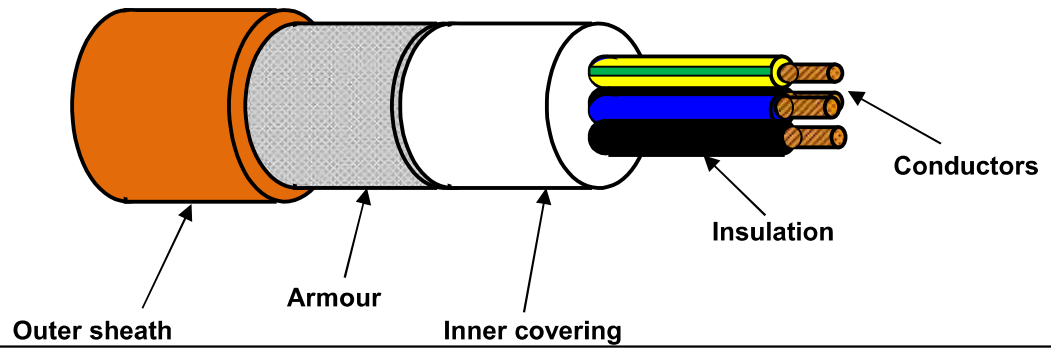
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-07	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-07	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-07	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-042

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-EJB-200N1-08-L1-03	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000718		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-01 To EJB-200N1-08-L1-03

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-03	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000718		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

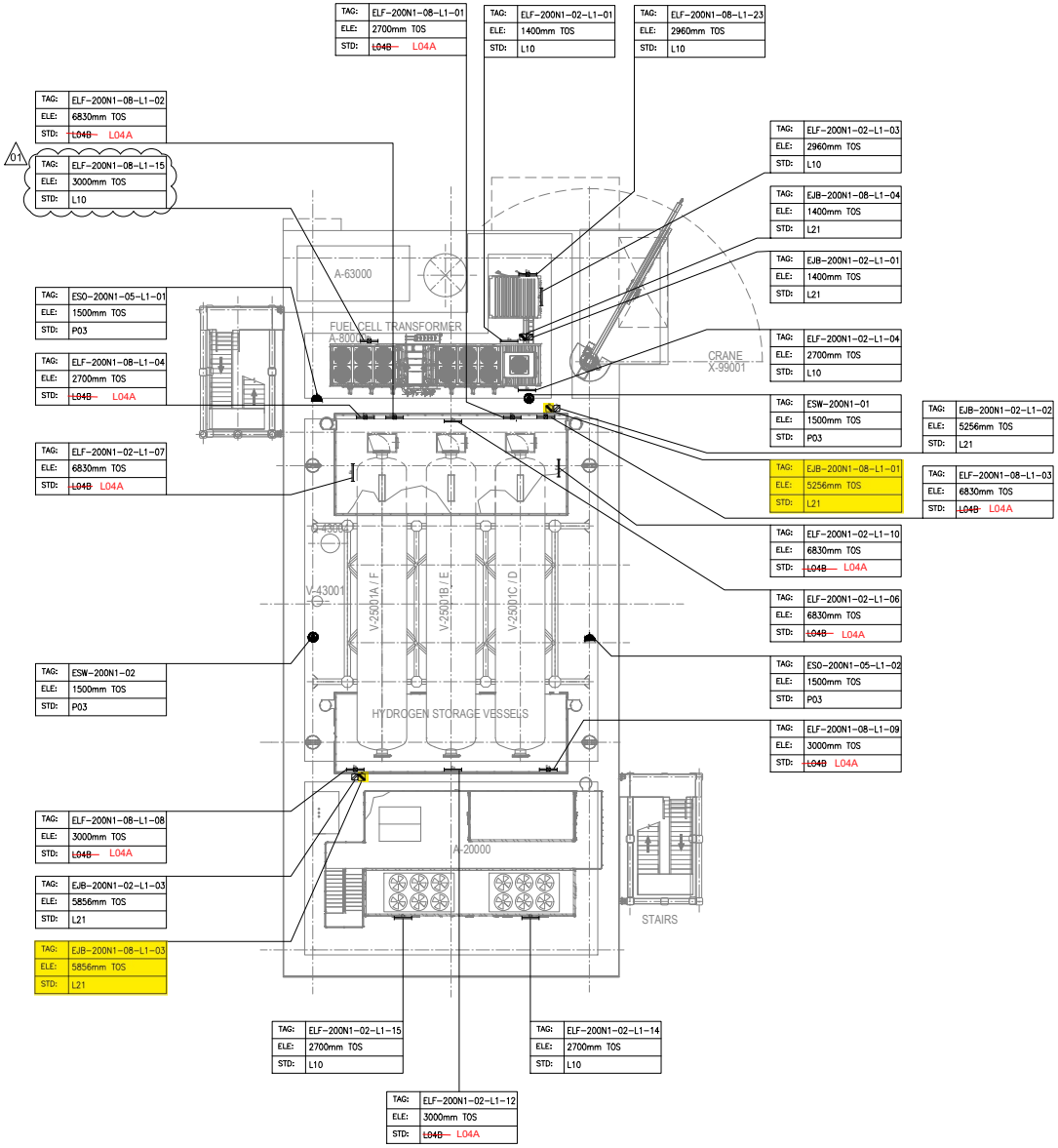
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

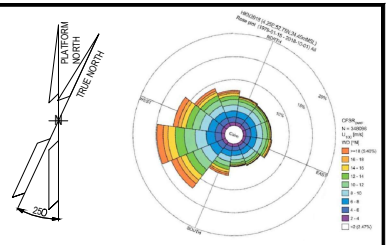
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-08	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:16:06.162Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-16T18:33:40.043Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

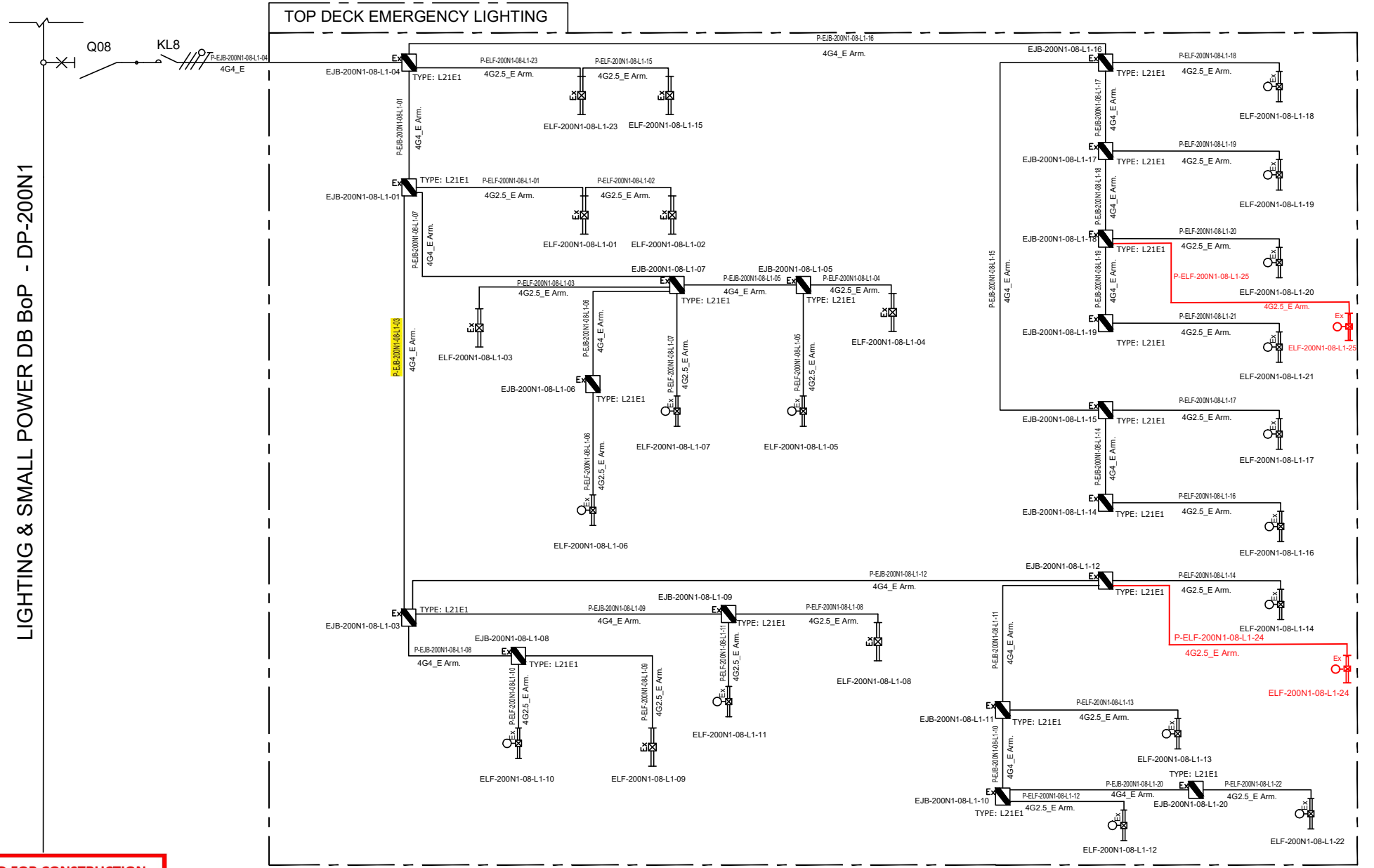
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

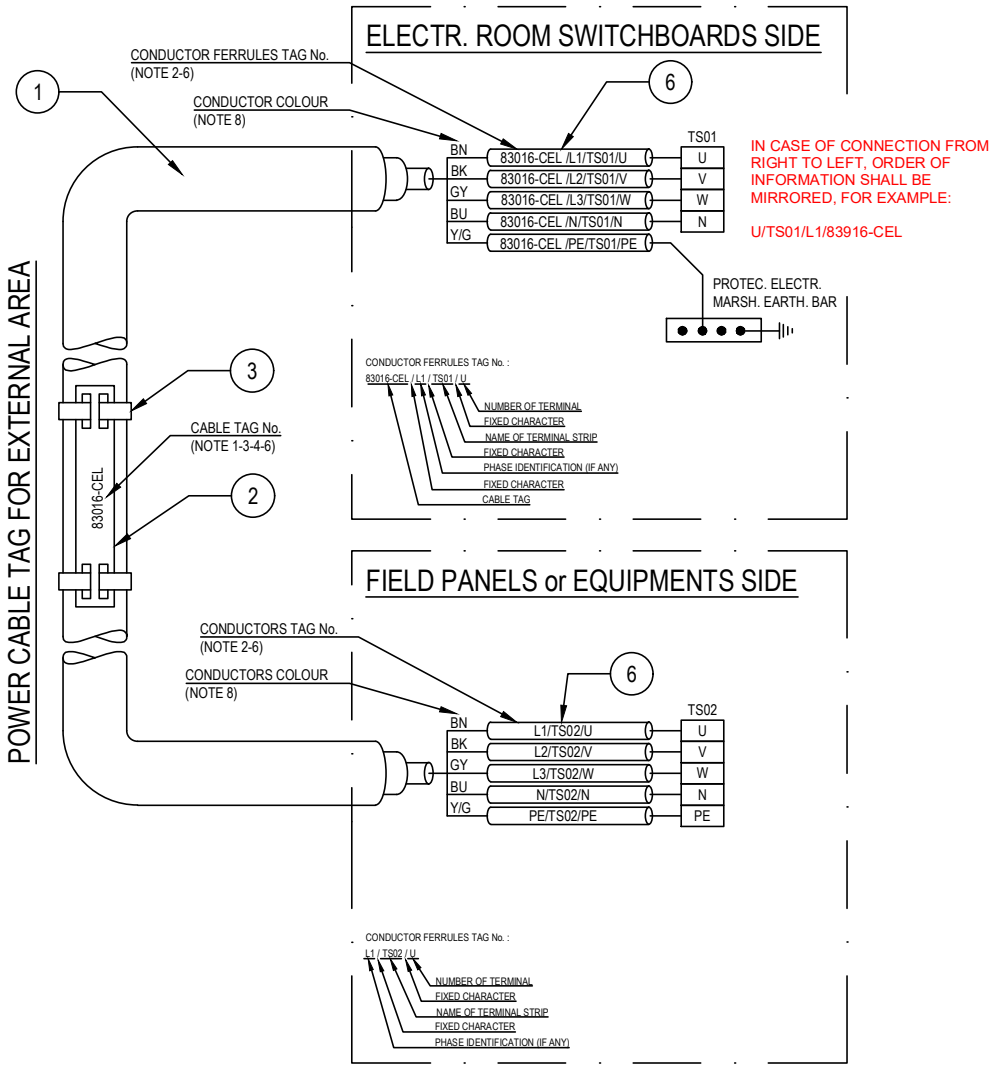
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

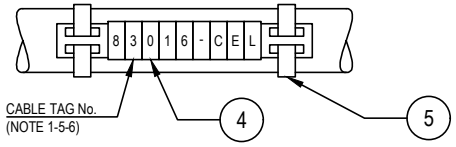
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

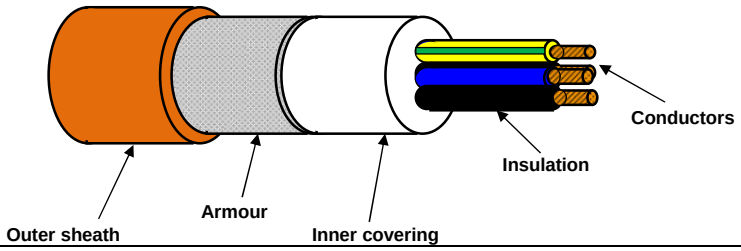
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-03	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-01	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-03	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CL2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double	M20	ADAP_M20Mx M25F		L-150-102-LVT-014 / L-150-102-LVT-010 / L-300-102-LVT-009 / E-MCT-U06 / L-300-101-LVT-095 / L-750-101-LVT-014 / L-600-101-LVT-094 / L-600-101-LVT-012 / L-150-101-LVT-104 / E-MCT-U05 / L-150-102-LVT-007 / L-150-102-LVT-008 / L-150-102-LVT-013

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-08	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000719		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-09 To ELF-200N1-08-L1-08

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	PL
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-08	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000719		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,08	
6		PH 2	0,08	
7		PH 3	0,08	
8	ARMOUR CONTINUITY Ω		0,08	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,08	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

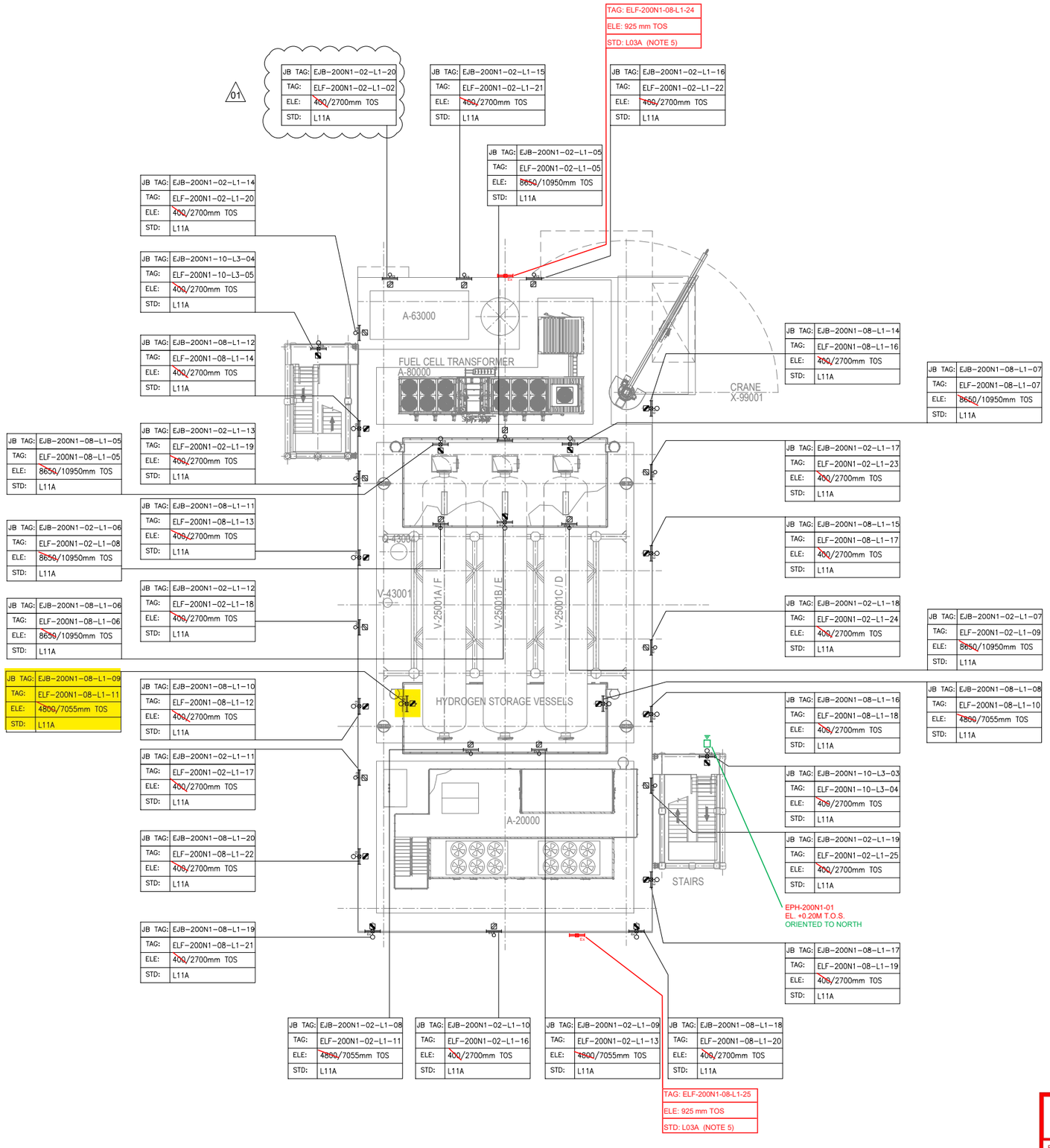
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

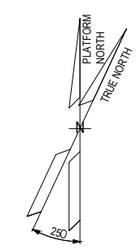
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:10:10.411Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-15T16:09:44.657Z	

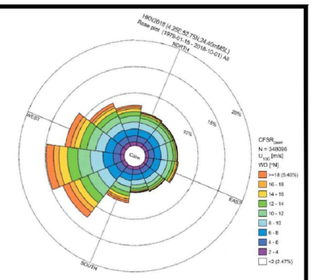
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

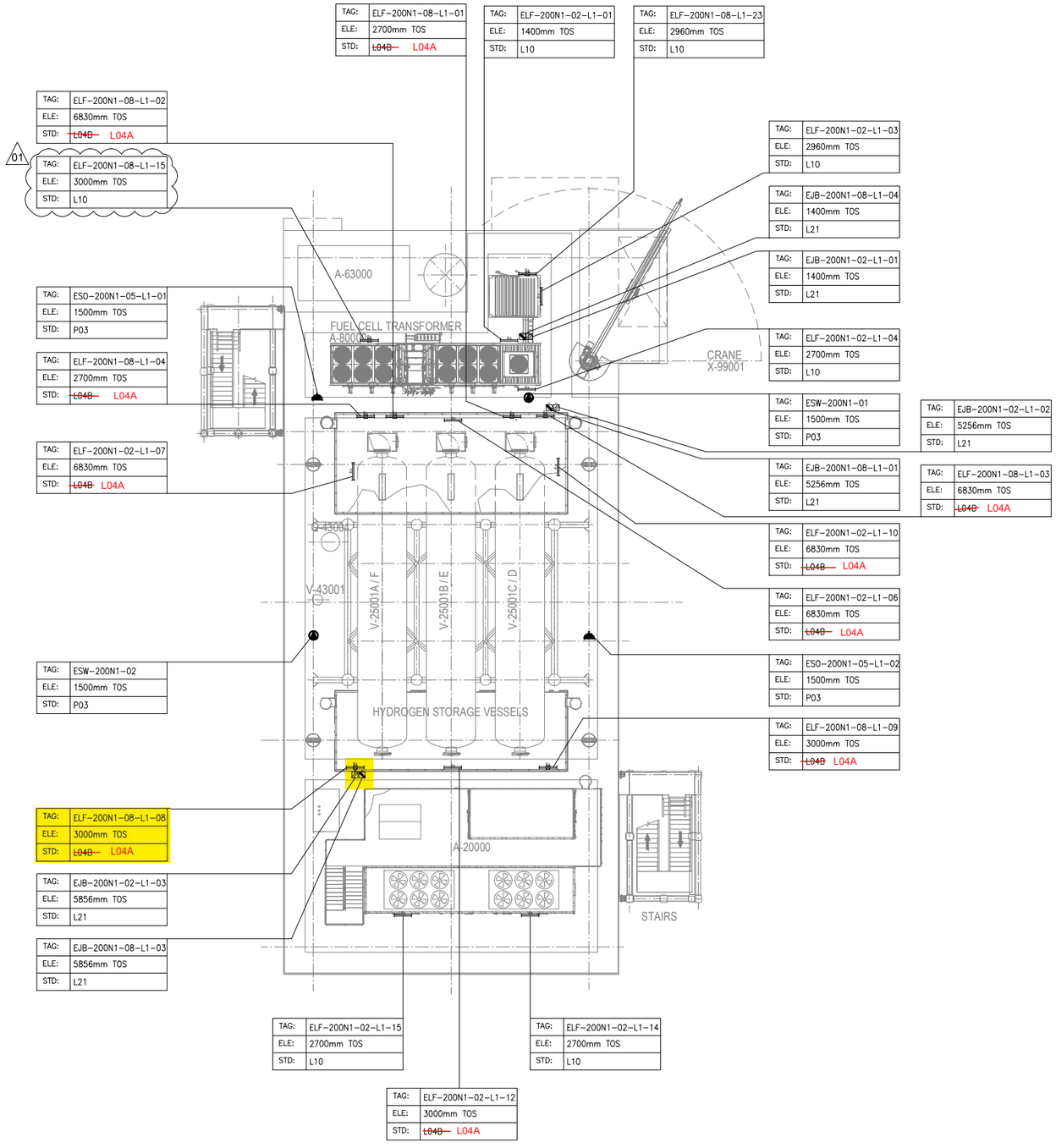
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

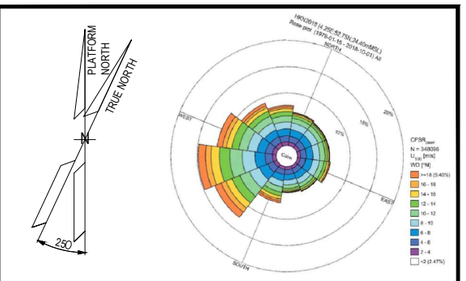
File Name : 123A90-DDL-EL-DL-20118

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
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4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

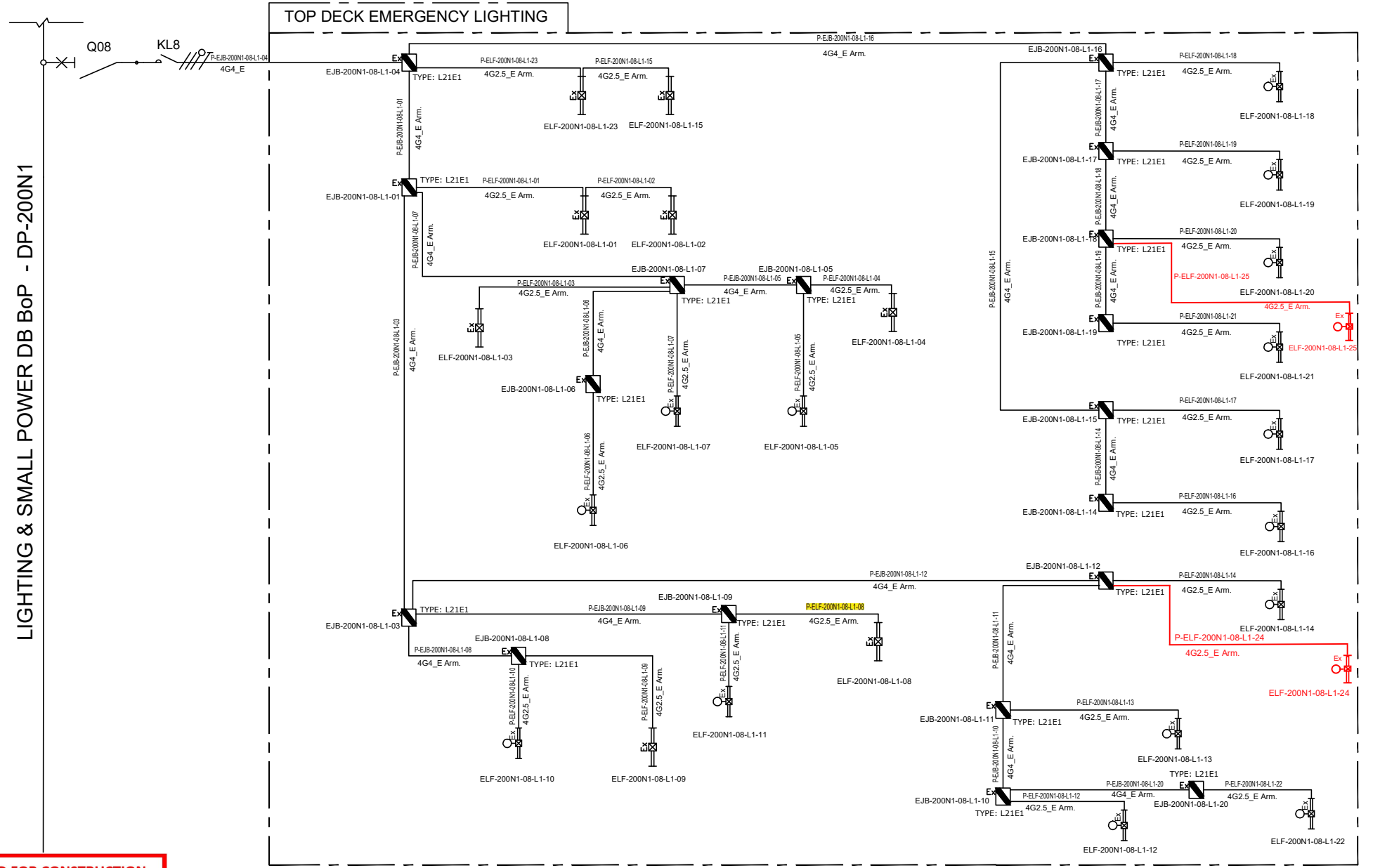
CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

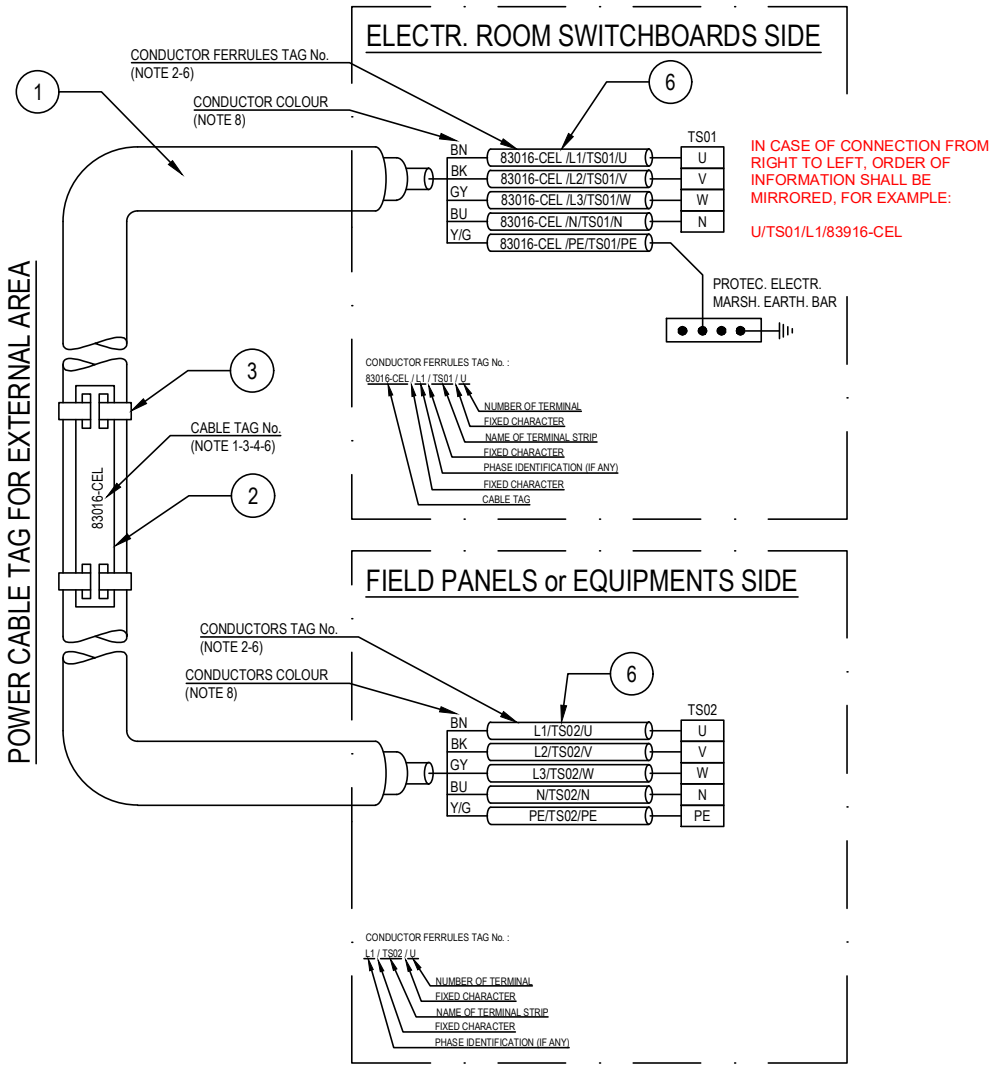
SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DG–20125	011	01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

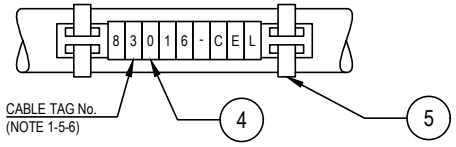
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

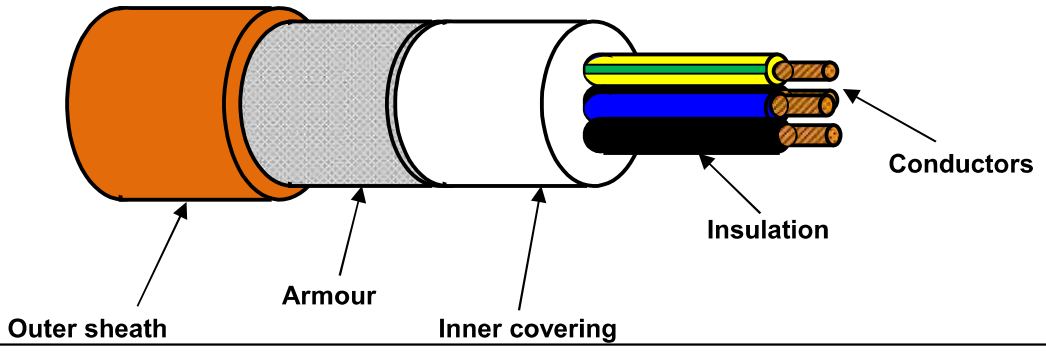
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-08	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-09	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-08	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Double				L-50-102-LVT-059 / L-150-102-LVT-008 / L-50-102-LVT-060

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-09	: Emergency Lighting Fixture / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000720		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-08 To ELF-200N1-08-L1-09

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	PL
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-09	: Emergency Lighting Fixture / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000720		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,08	
6		PH 2	0,08	
7		PH 3	0,08	
8	ARMOUR CONTINUITY Ω		0,08	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,08	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

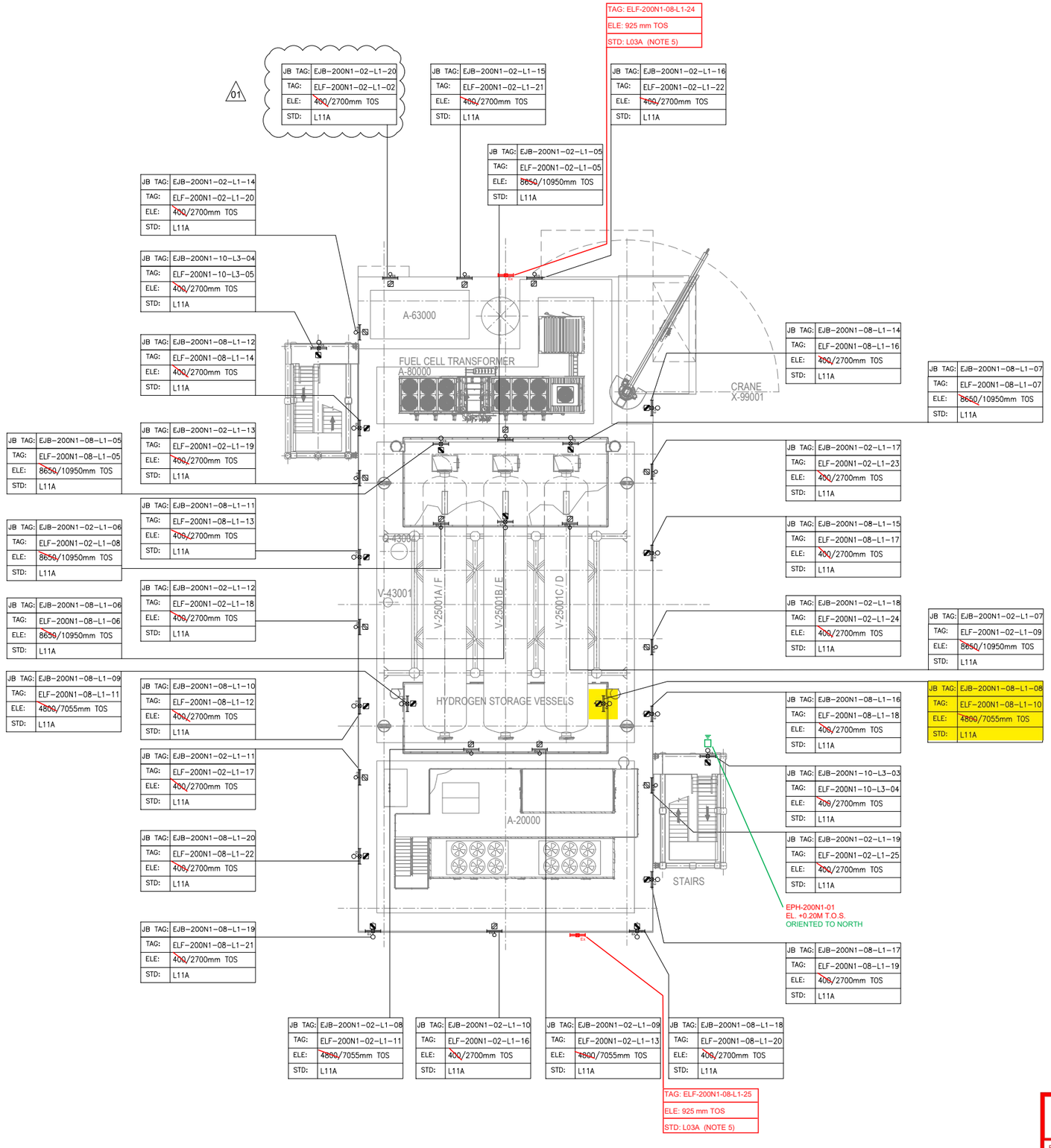
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments:

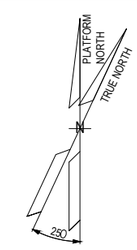
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-13	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T08:59:46.251Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-15T16:12:39.063Z	

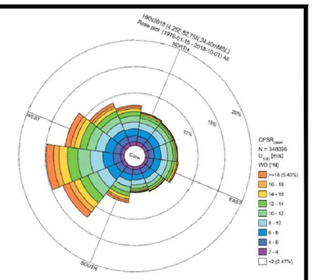
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
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4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

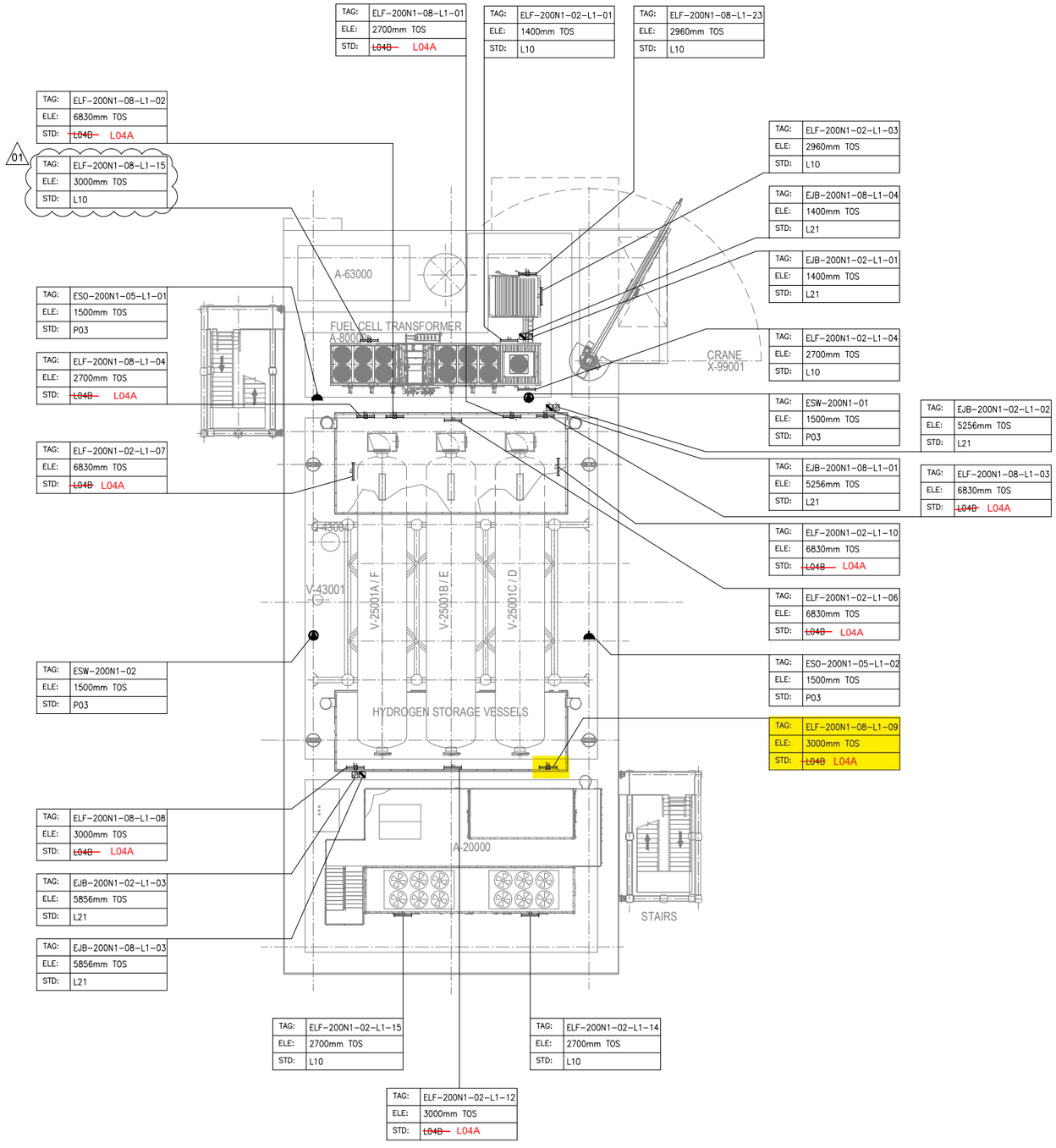
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

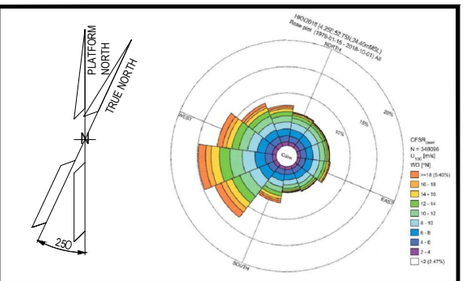
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DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



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REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

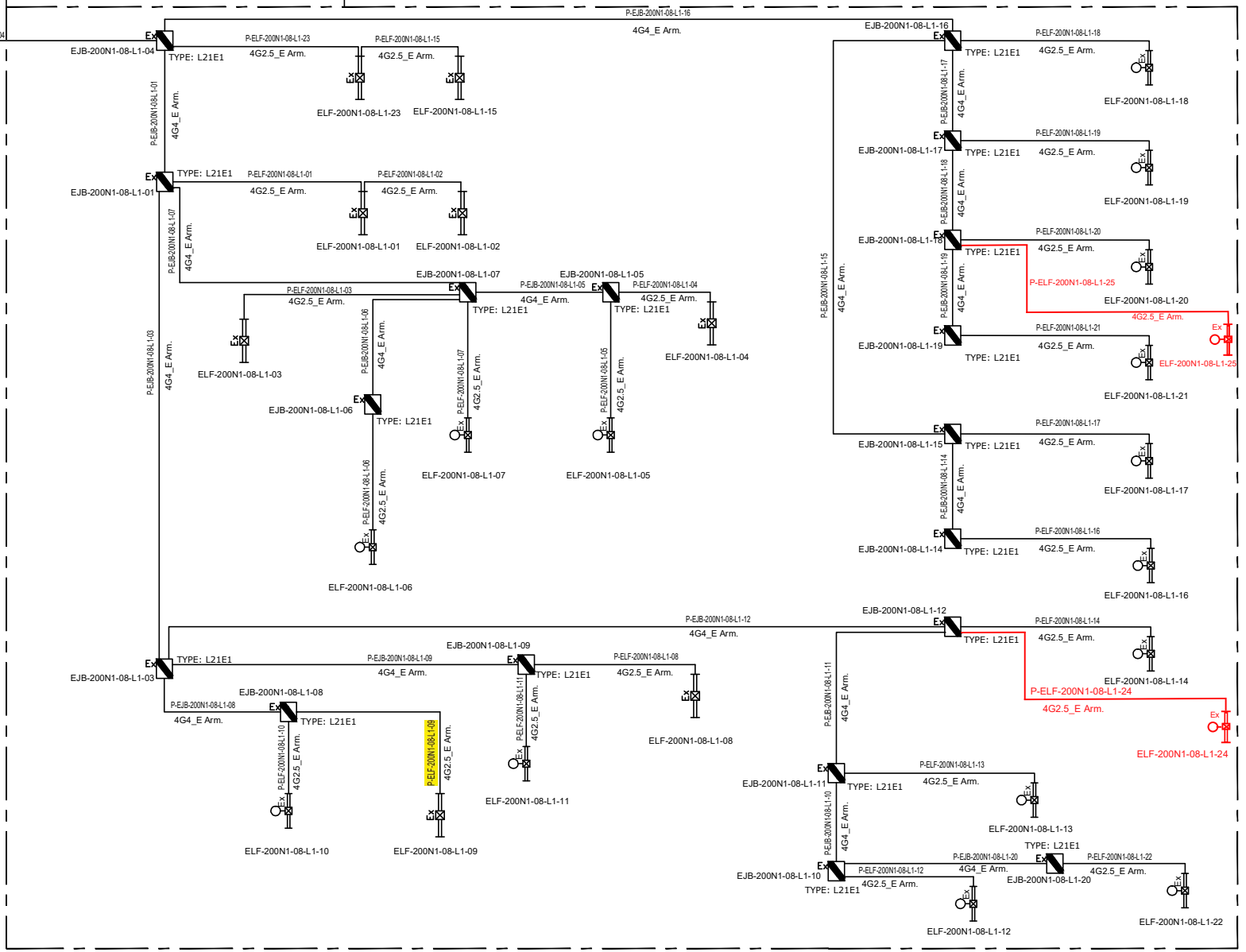
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DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE	01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118		SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

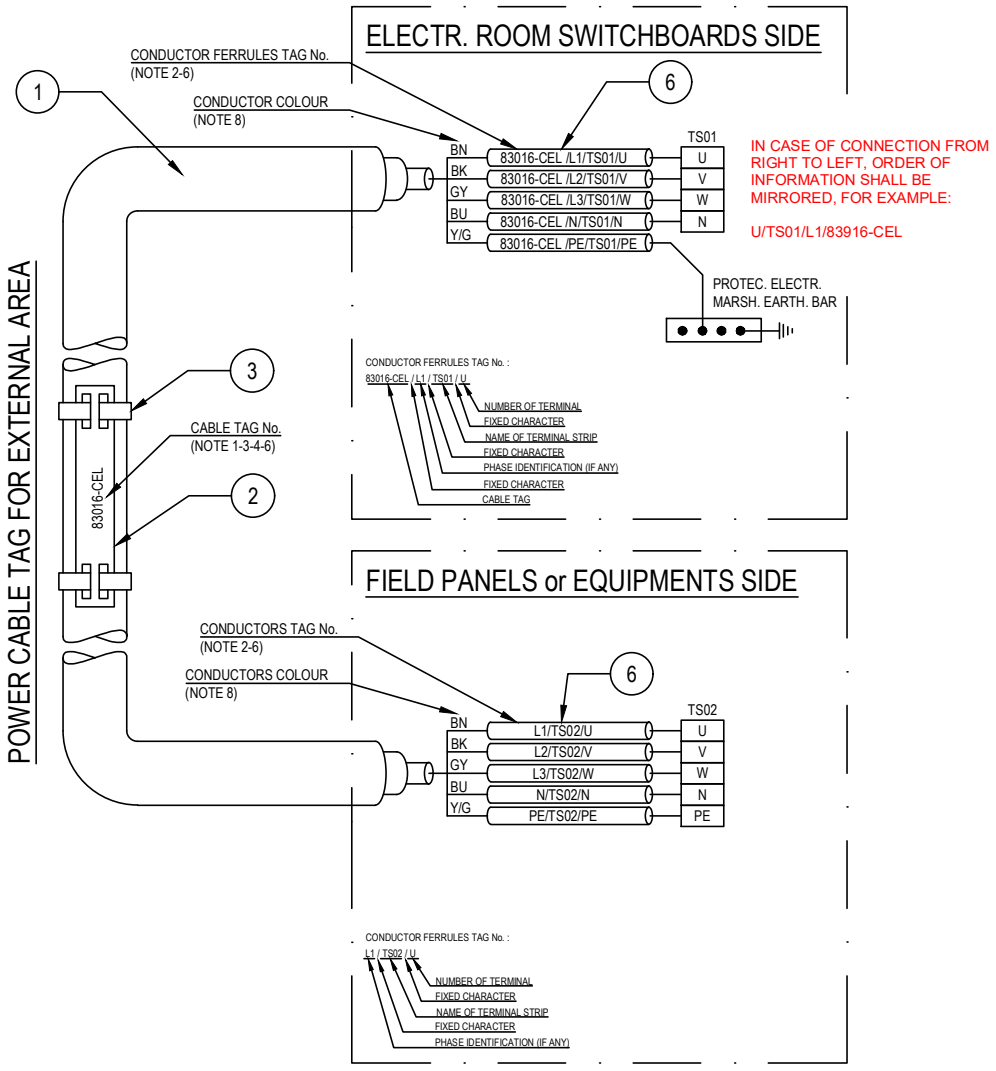
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

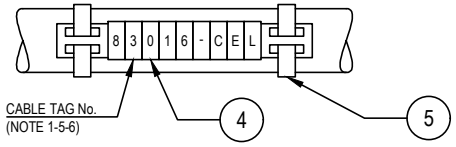
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

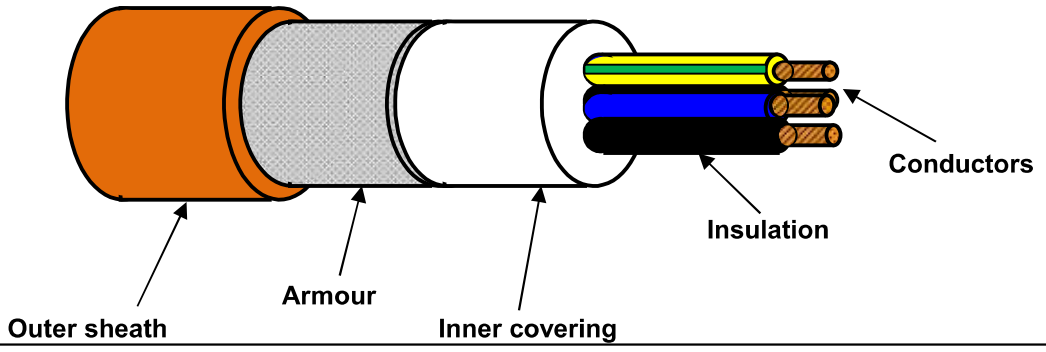
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-09	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-08	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-09	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-060 / L-150-102-LVT-008

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-08	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000721		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type: Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH | Cores/Size mm²: 4G4_E mm2 | Color: ORANGE

From: EJB-200N1-08-L1-03 | To: EJB-200N1-08-L1-08

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-08	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
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TASK	code	C10000721		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

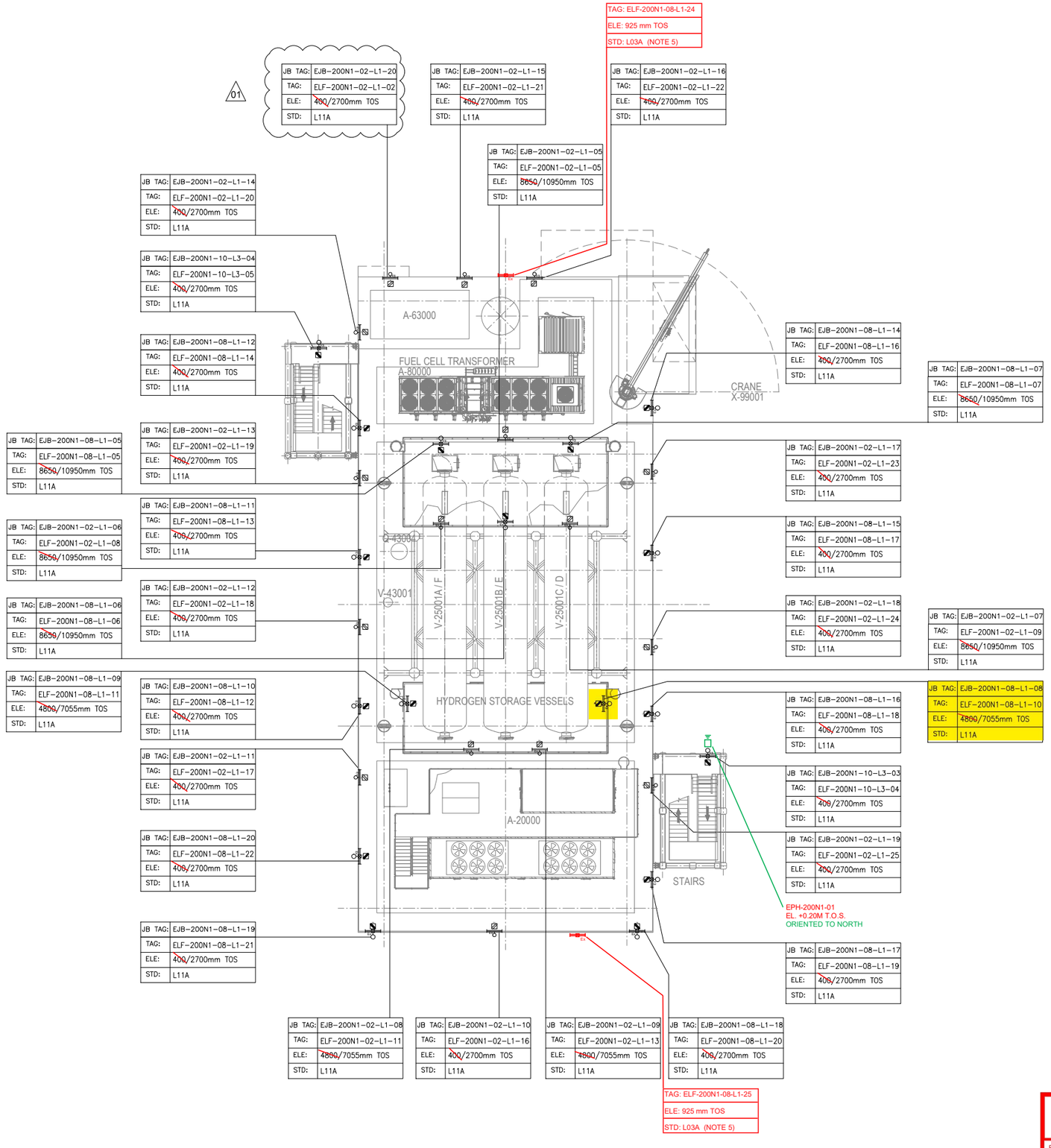
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Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

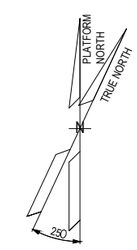
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Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:10:36.700Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-16T18:36:25.402Z	

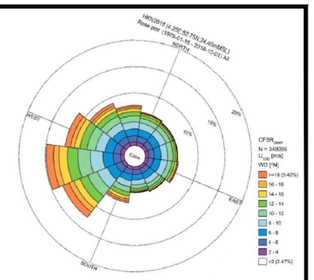
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REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





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REFERENCE DOCUMENTS

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123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
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1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

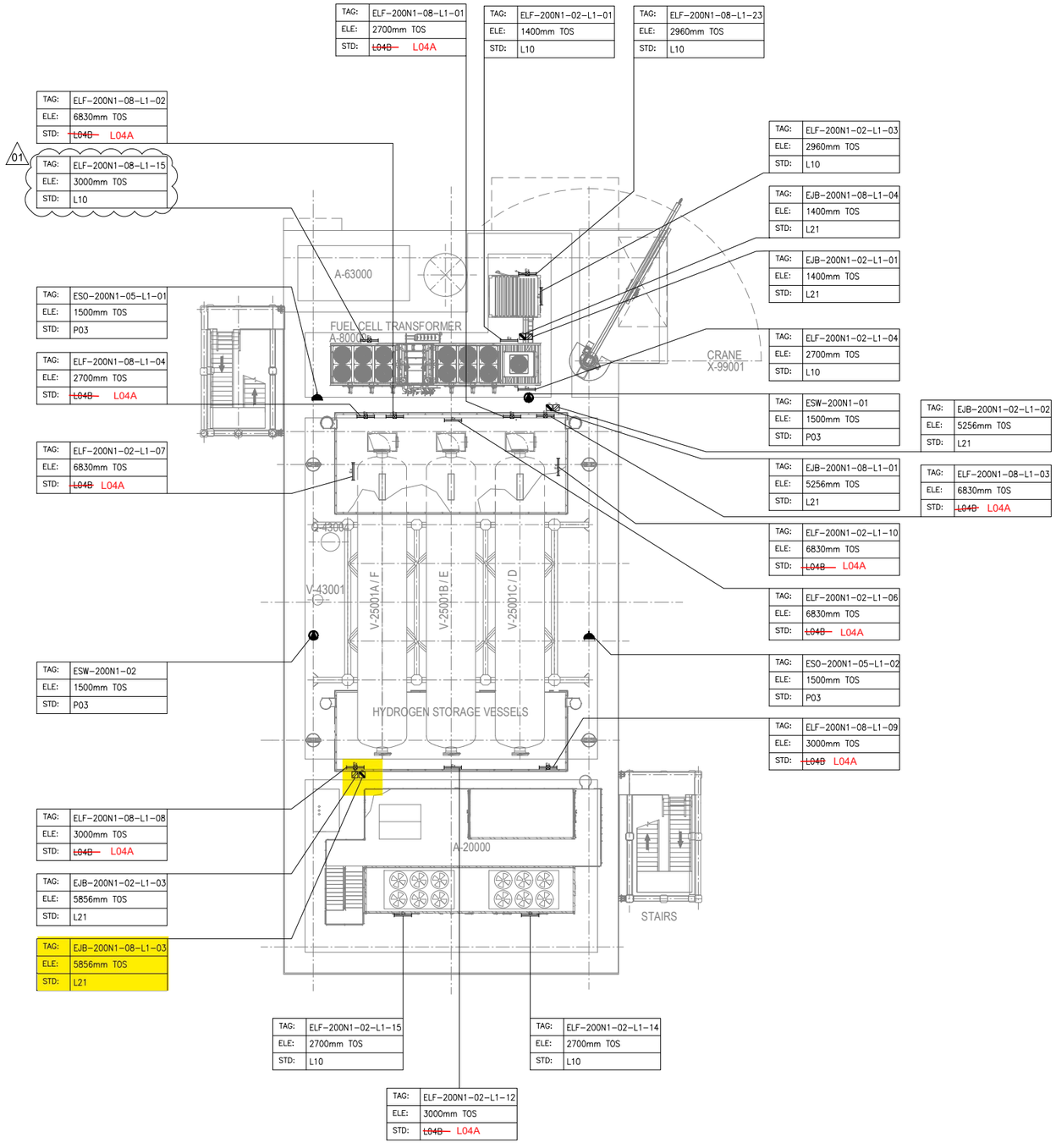
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

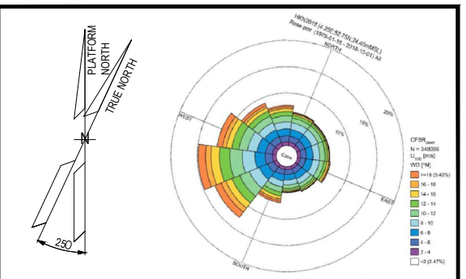
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DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

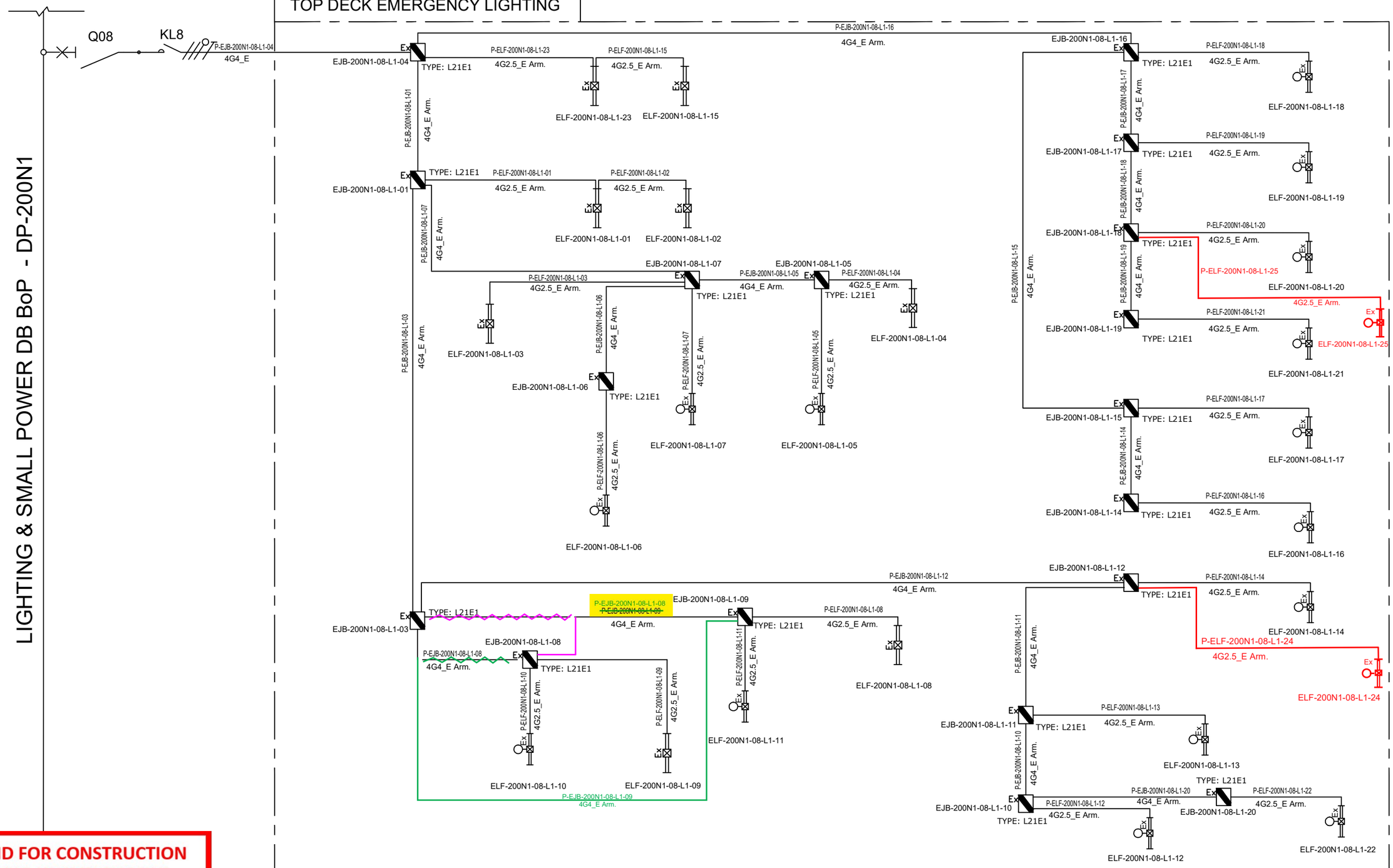
TITLE :
BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

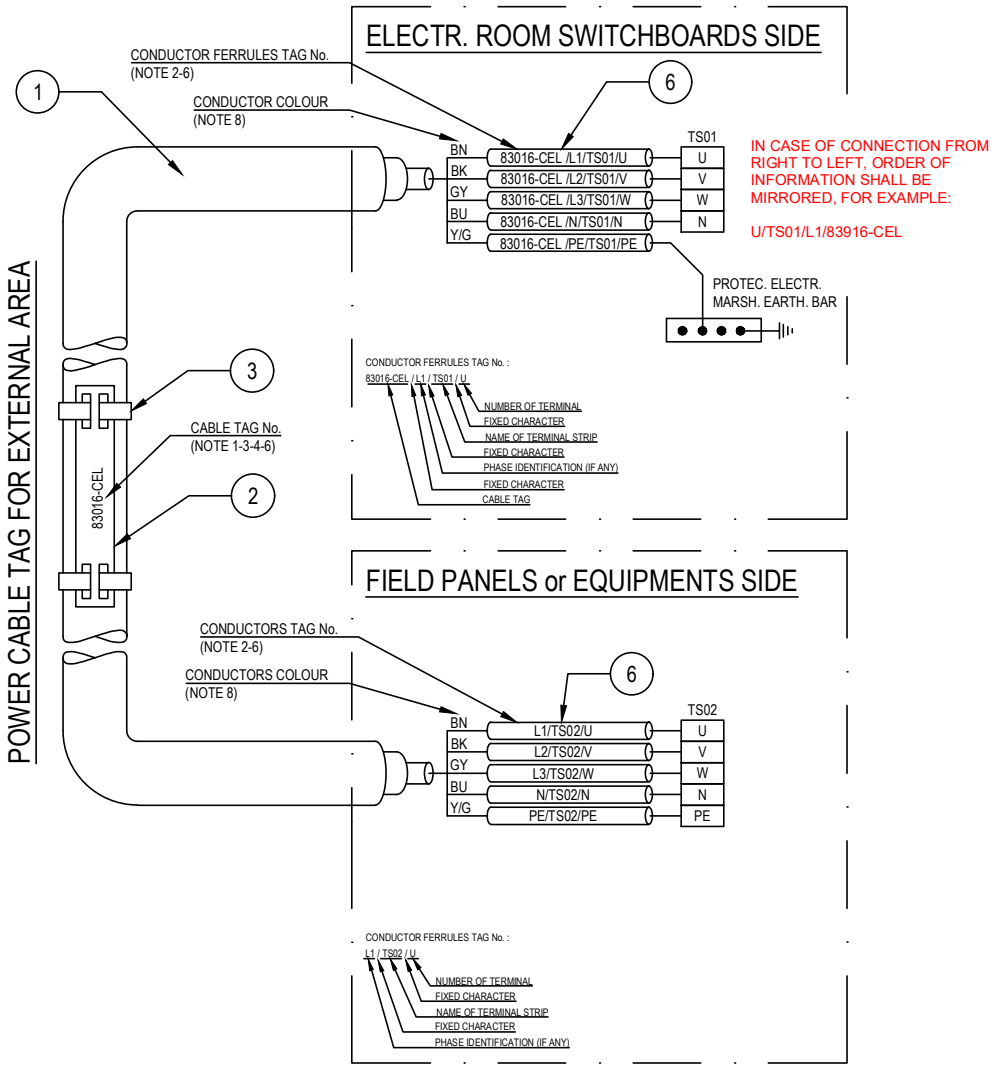
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

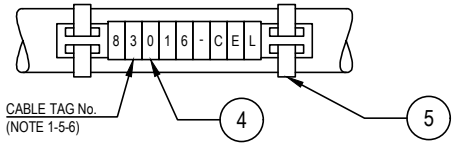
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

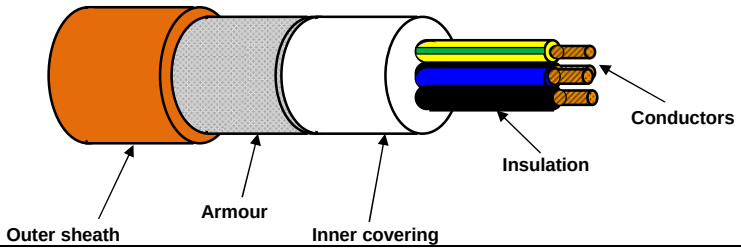
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-08	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-03	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-08	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-013 / L-150-102-LVT-008 / L-50-102-LVT-060

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-10	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000722		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-08 To ELF-200N1-08-L1-10

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	PL
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

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ITEM	Tag	P-ELF-200N1-08-L1-10	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000722		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		NA	

TESTING INSTRUMENTS USED

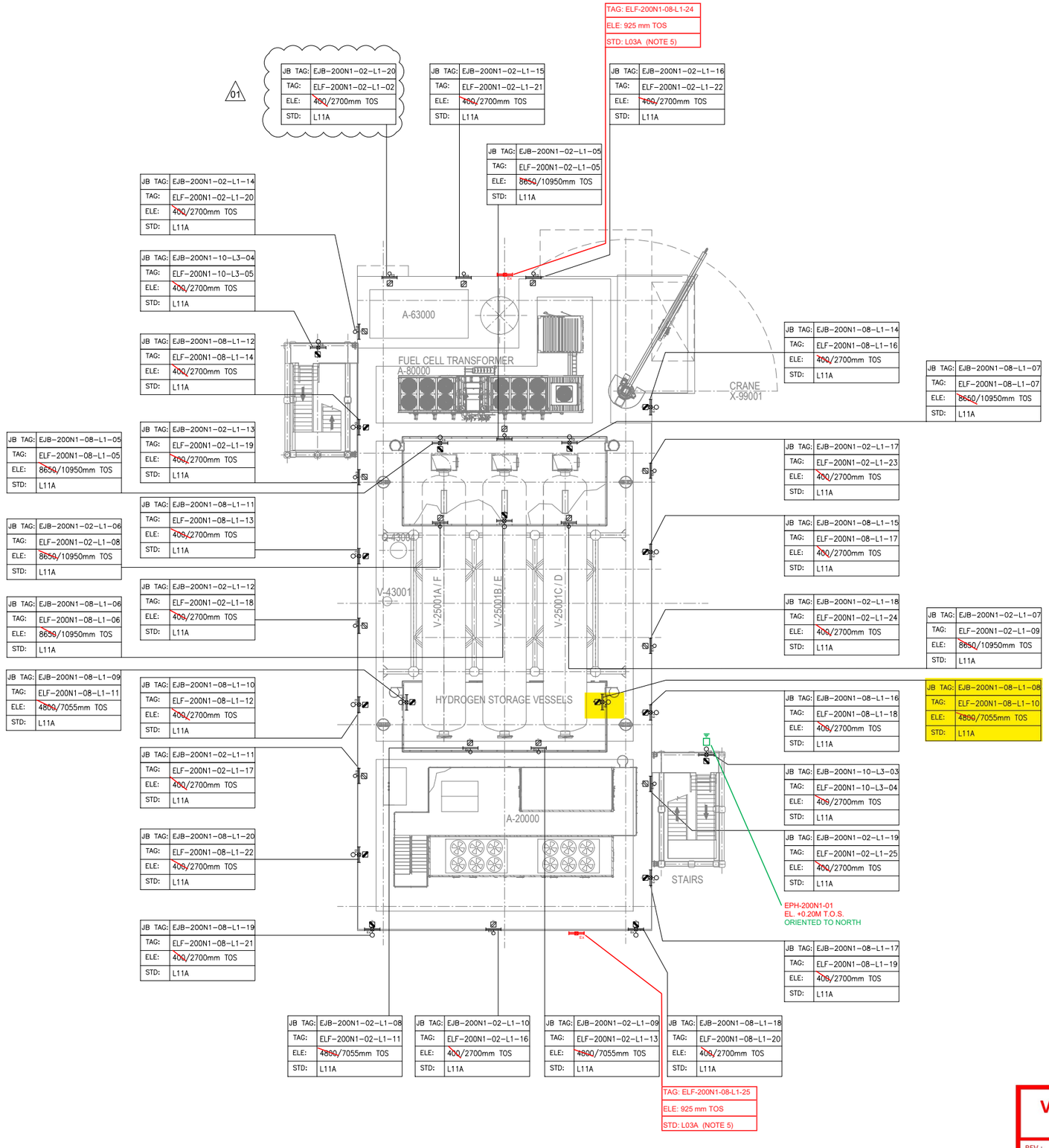
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

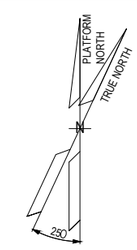
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Luca Mussi	
Date	2024-11-22	2025-01-18	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:18:41.807Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-18T09:48:14.801Z	

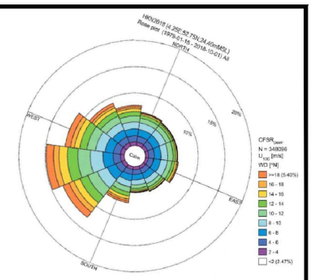
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

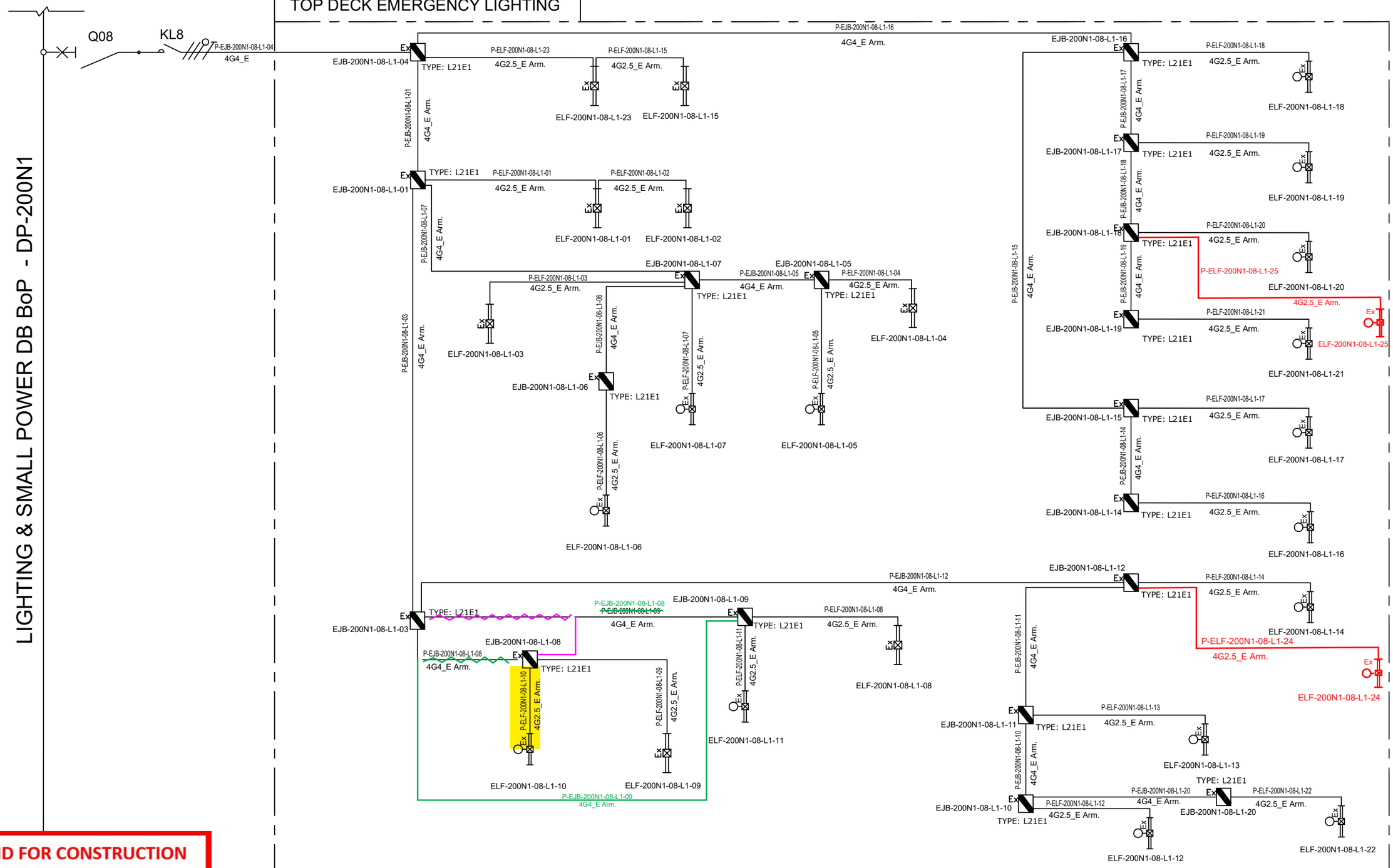
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE	01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118		SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DG-20125 | SHEET 011 | REV. 01

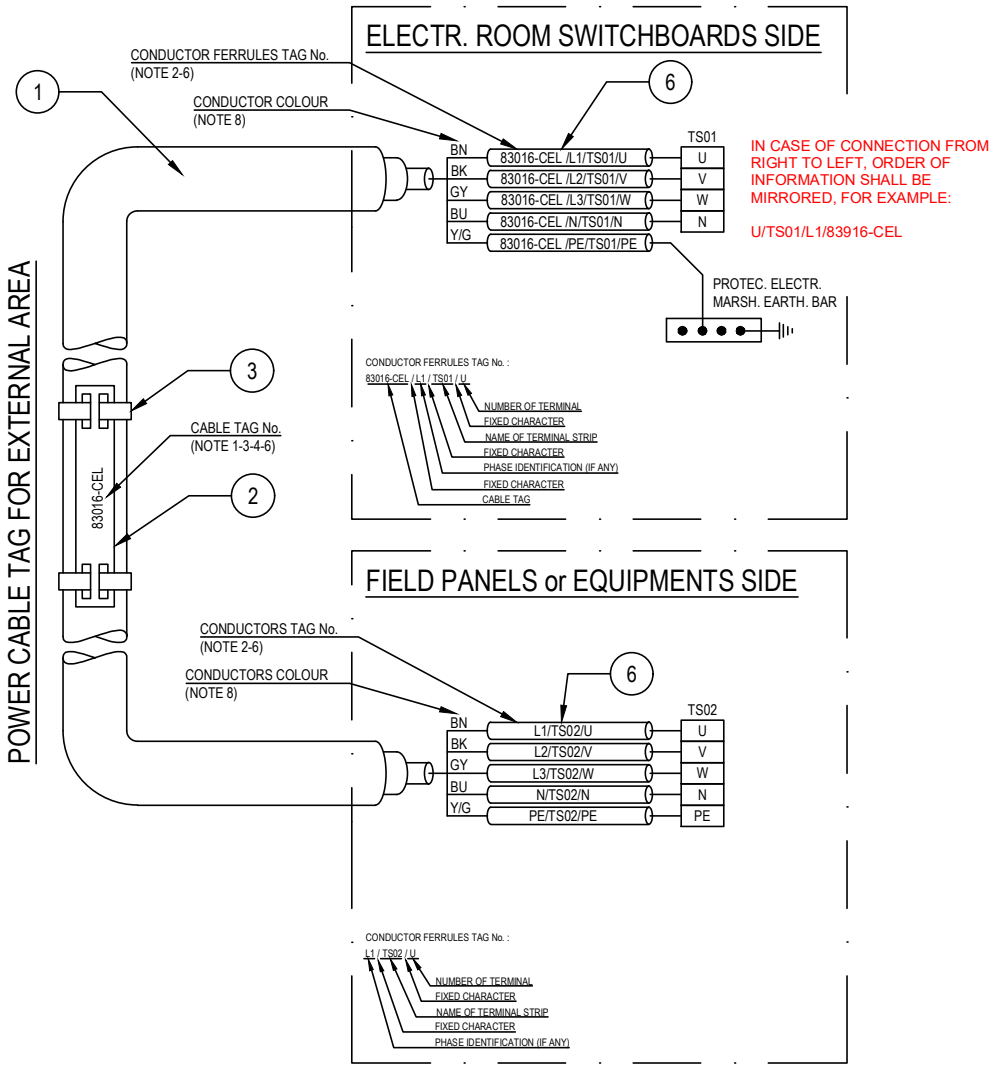
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

CROSSWIND

ROSETTI MARINO

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
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5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

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1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
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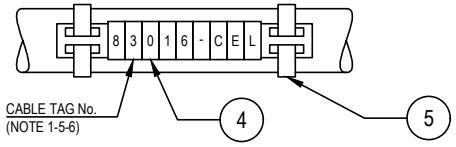
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- EARTH BAR AND EARTH BOSS

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POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

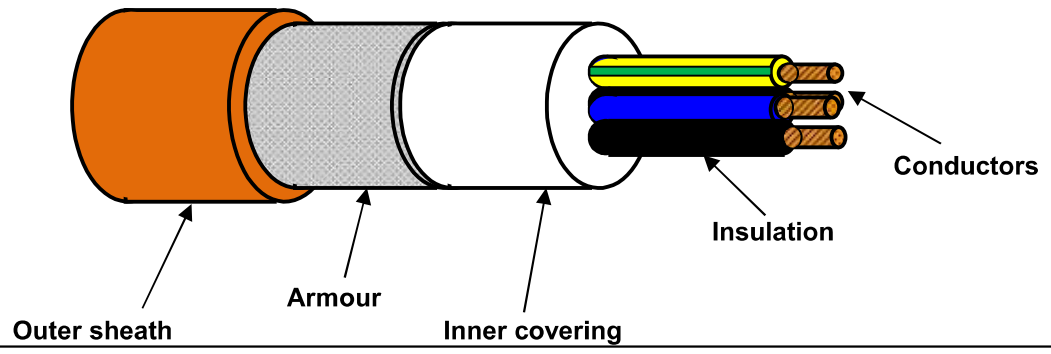
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-10	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-08	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-10	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Double				L-50-102-LVT-025

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-09	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000723		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-03 To EJB-200N1-08-L1-09

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-09	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000723		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

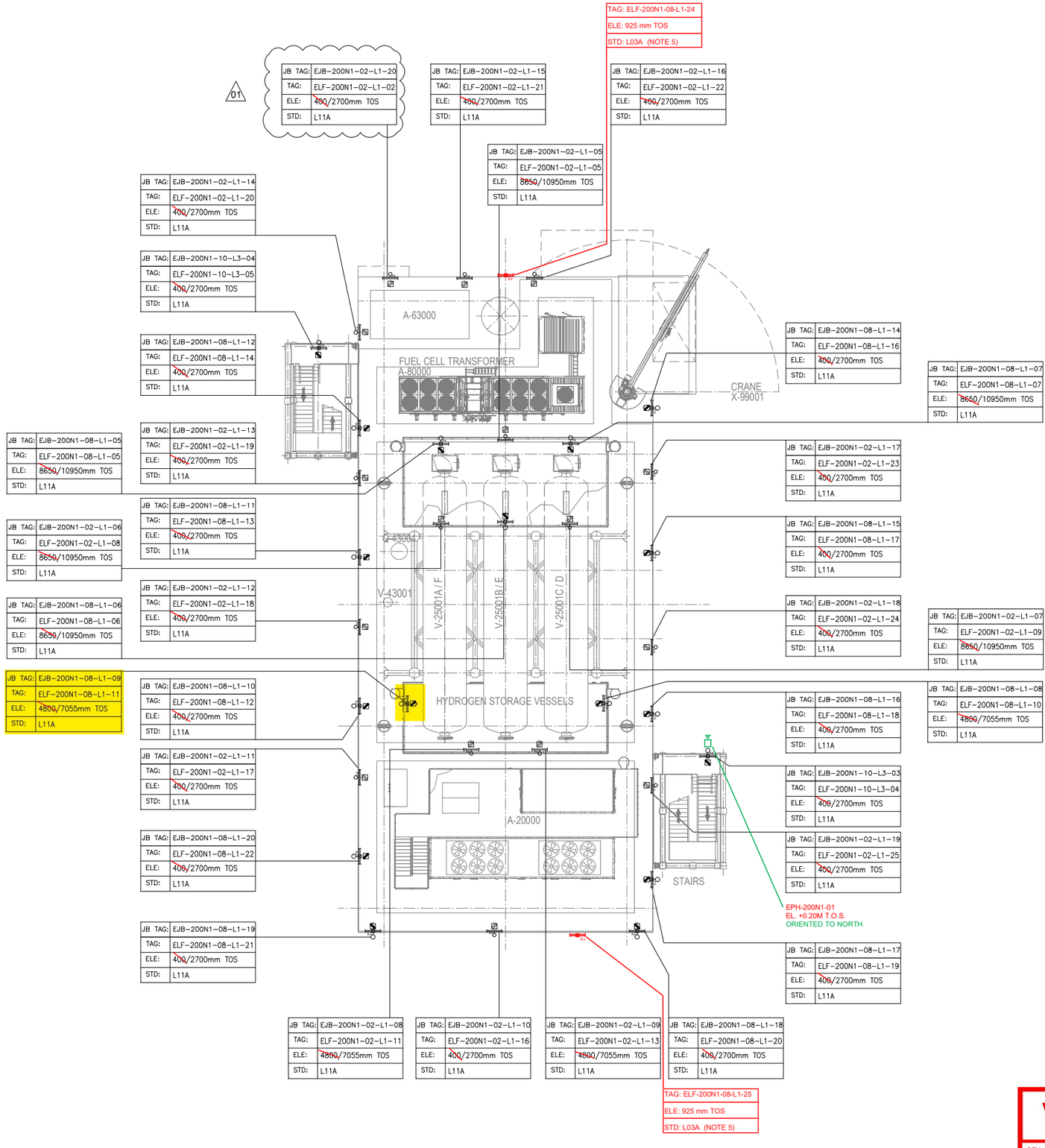
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

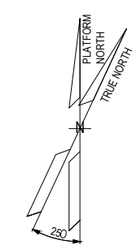
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:10:57.856Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:40:57.086Z	

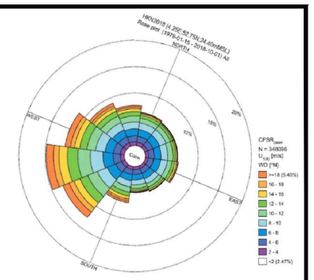
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

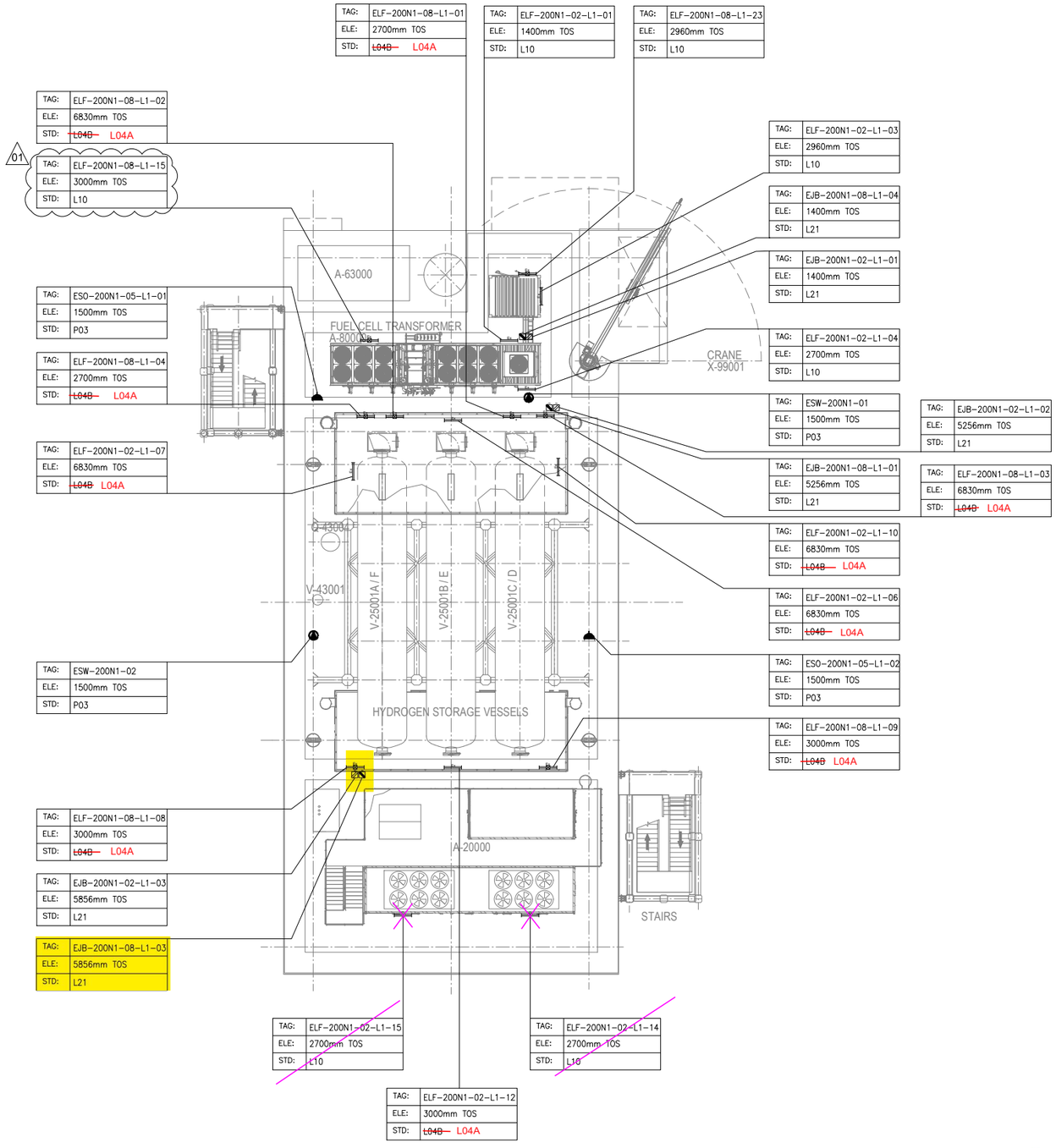
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

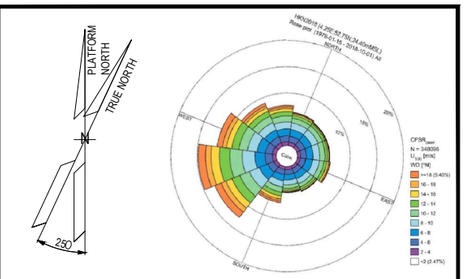
File Name : 123A90-DDL-EL-DL-20118

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

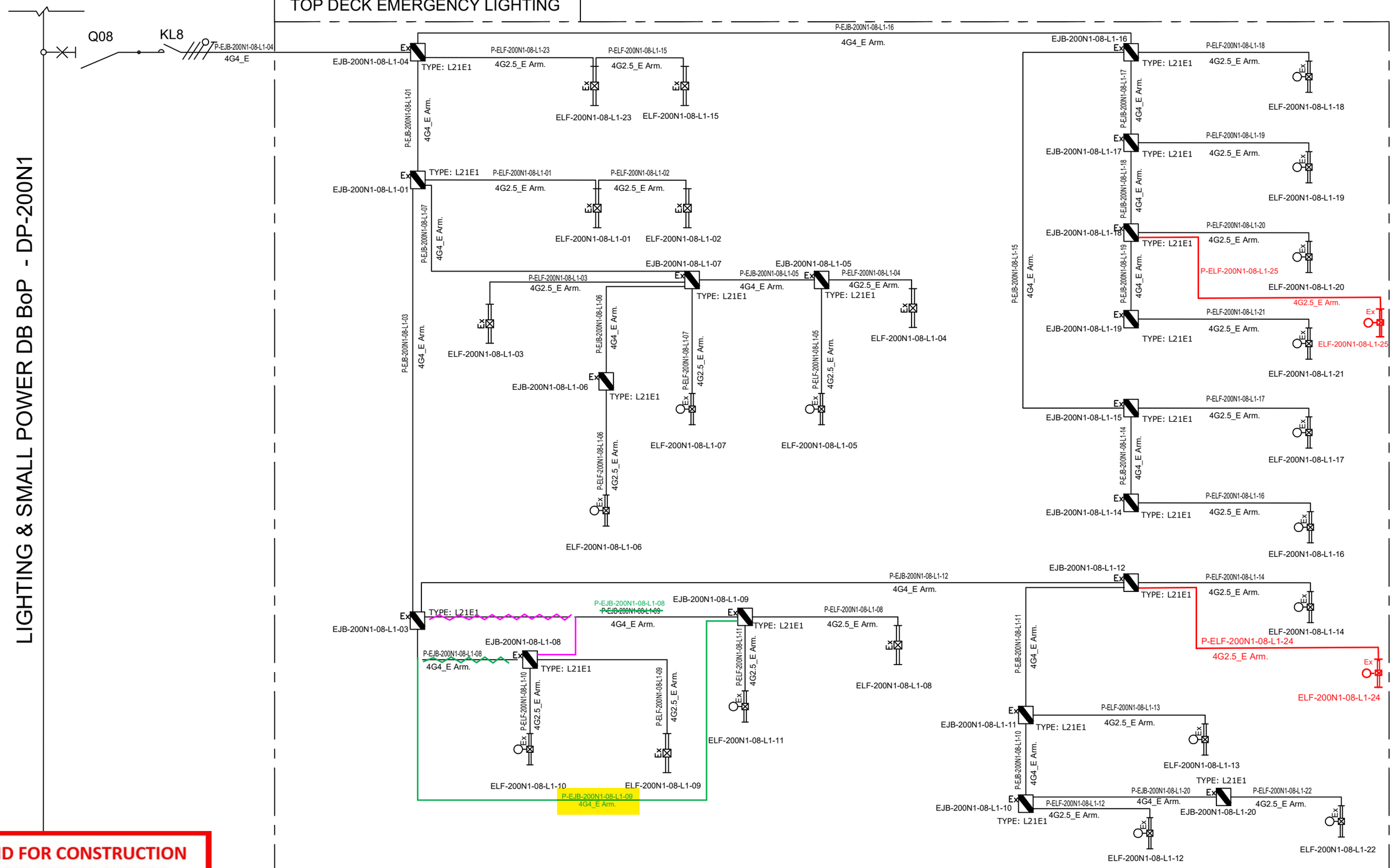
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO		DATE	01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118			SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

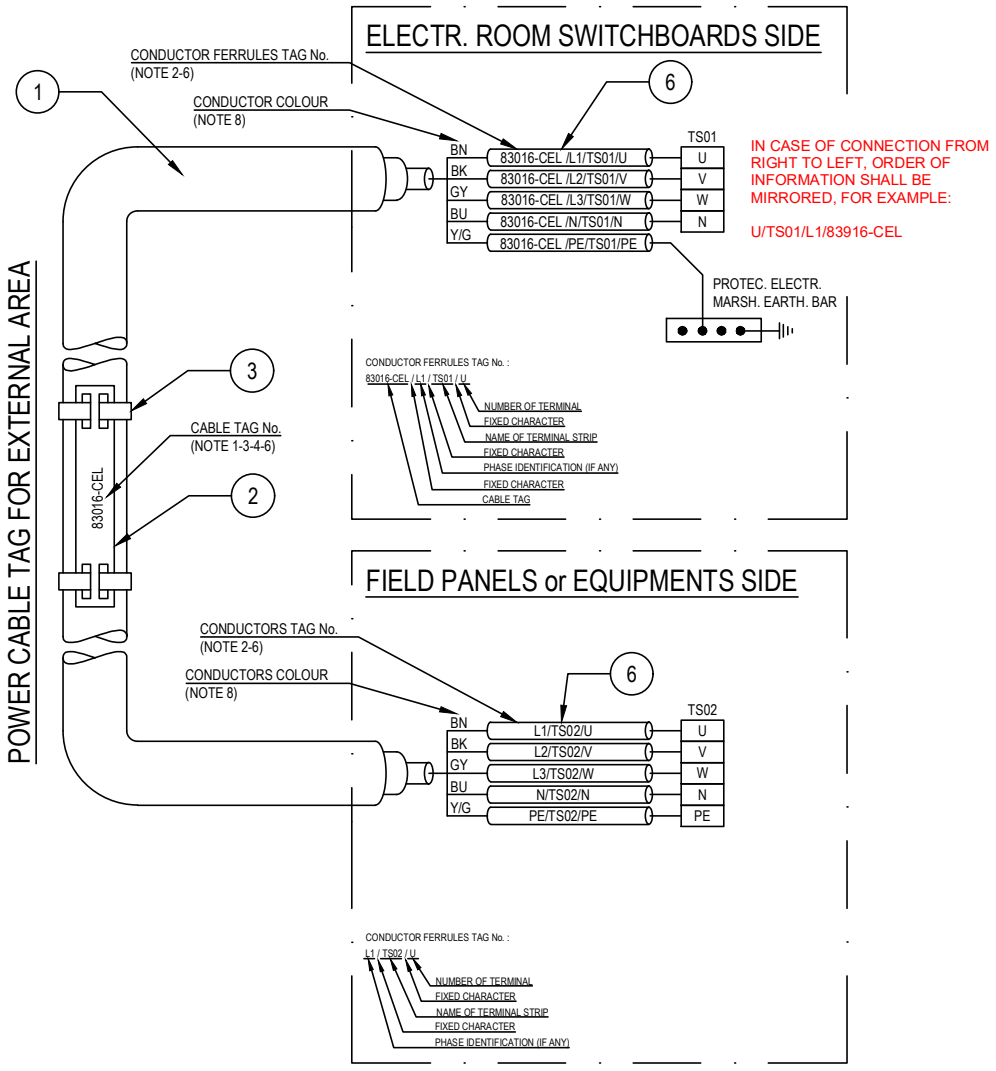
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

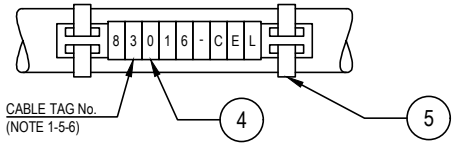
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

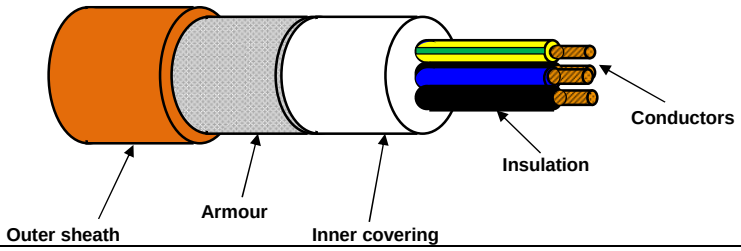
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-09	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-03	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-09	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0.6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-013 / L-150-102-LVT-008 / L-50-102-LVT-059

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-11	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000724		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-09 To ELF-200N1-08-L1-11

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-11	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000724		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

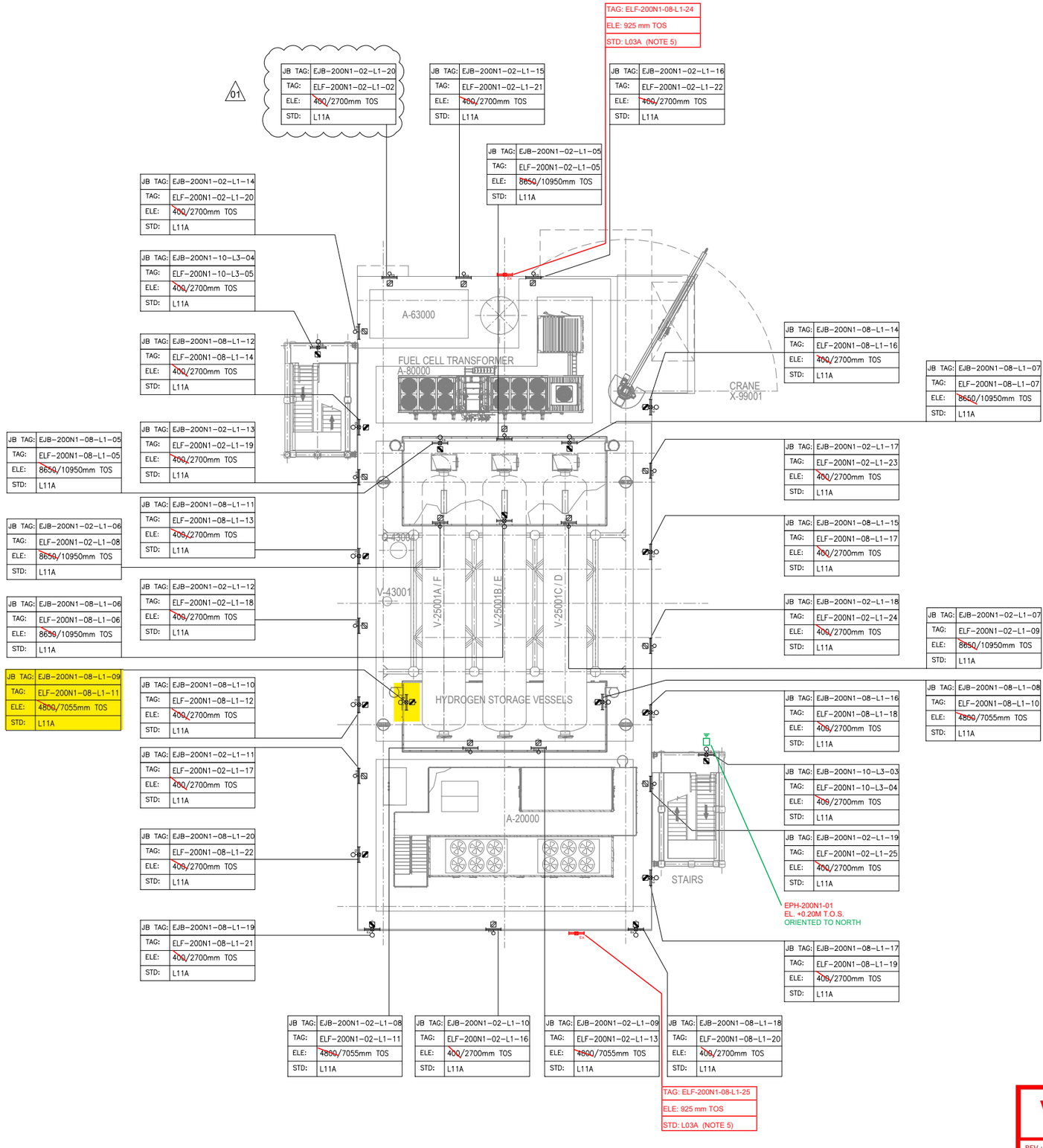
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Andrea Andreani	
Date	2024-11-22	2025-01-18	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:18:59.431Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-18T09:48:24.608Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



JB TAG:	EJB-200N1-02-L1-20
TAG:	ELF-200N1-02-L1-02
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-15
TAG:	ELF-200N1-02-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-16
TAG:	ELF-200N1-02-L1-22
ELE:	400/2700mm TOS
STD:	L11A

TAG: ELF-200N1-08-L1-24
ELE: 925 mm TOS
STD: L03A (NOTE 5)

JB TAG:	EJB-200N1-02-L1-05
TAG:	ELF-200N1-02-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-14
TAG:	ELF-200N1-02-L1-20
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-04
TAG:	ELF-200N1-10-L3-05
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-12
TAG:	ELF-200N1-08-L1-14
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-14
TAG:	ELF-200N1-08-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-07
TAG:	ELF-200N1-08-L1-07
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-13
TAG:	ELF-200N1-02-L1-19
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-05
TAG:	ELF-200N1-08-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-17
TAG:	ELF-200N1-02-L1-23
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-11
TAG:	ELF-200N1-08-L1-13
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-06
TAG:	ELF-200N1-02-L1-08
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-15
TAG:	ELF-200N1-08-L1-17
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-12
TAG:	ELF-200N1-02-L1-18
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-18
TAG:	ELF-200N1-02-L1-24
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-06
TAG:	ELF-200N1-08-L1-06
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-07
TAG:	ELF-200N1-02-L1-09
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-09
TAG:	ELF-200N1-08-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-10
TAG:	ELF-200N1-08-L1-12
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-16
TAG:	ELF-200N1-08-L1-18
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-08
TAG:	ELF-200N1-08-L1-10
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-11
TAG:	ELF-200N1-02-L1-17
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-03
TAG:	ELF-200N1-10-L3-04
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-20
TAG:	ELF-200N1-08-L1-22
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-19
TAG:	ELF-200N1-02-L1-25
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-19
TAG:	ELF-200N1-08-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-17
TAG:	ELF-200N1-08-L1-19
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-08
TAG:	ELF-200N1-02-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

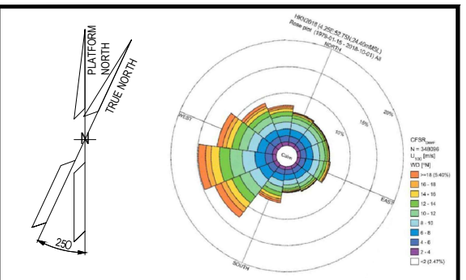
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TAG:	ELF-200N1-02-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-09
TAG:	ELF-200N1-02-L1-13
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-18
TAG:	ELF-200N1-08-L1-20
ELE:	400/2700mm TOS
STD:	L11A

TAG: ELF-200N1-08-L1-25
ELE: 925 mm TOS
STD: L03A (NOTE 5)

PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20118

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

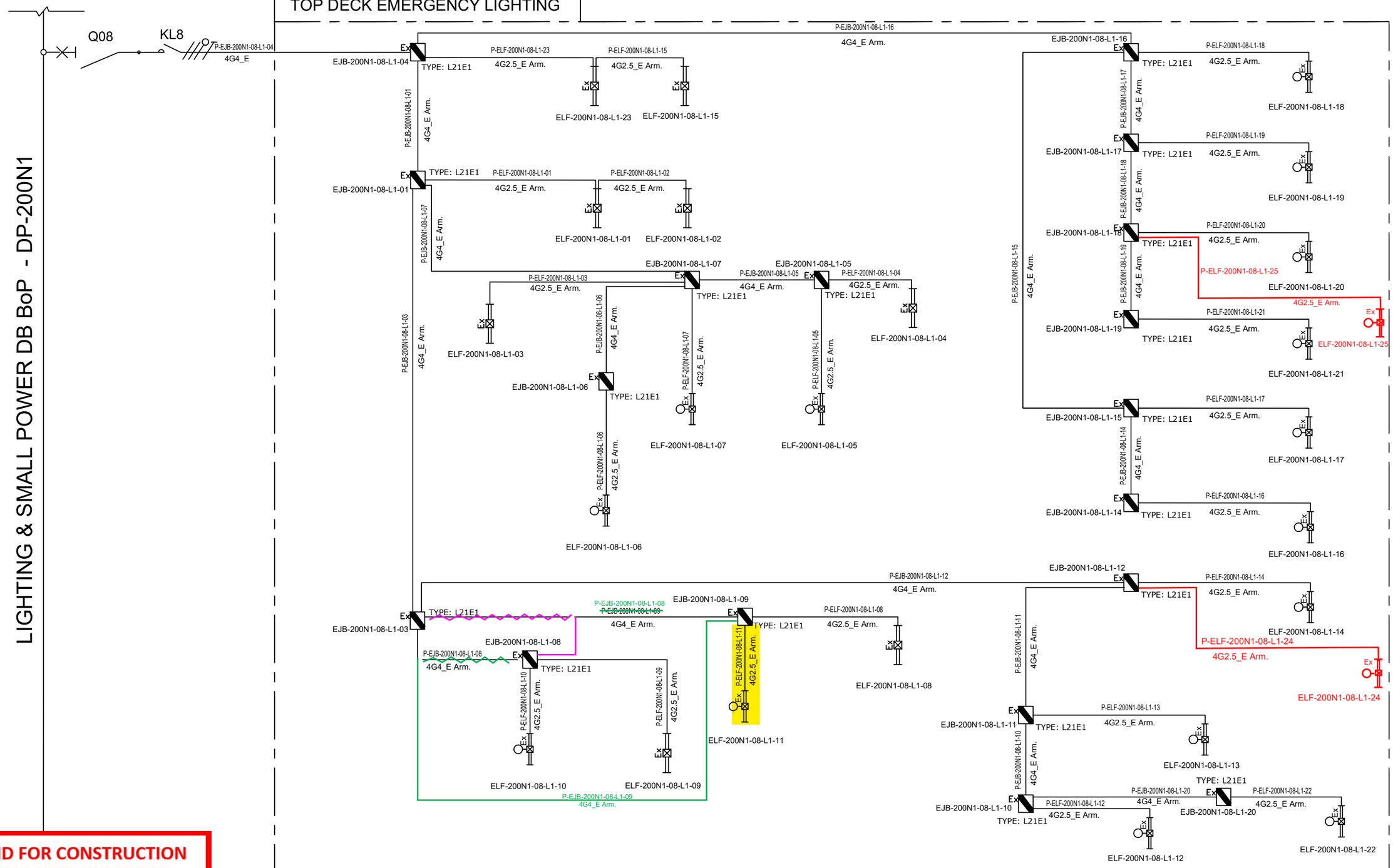
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

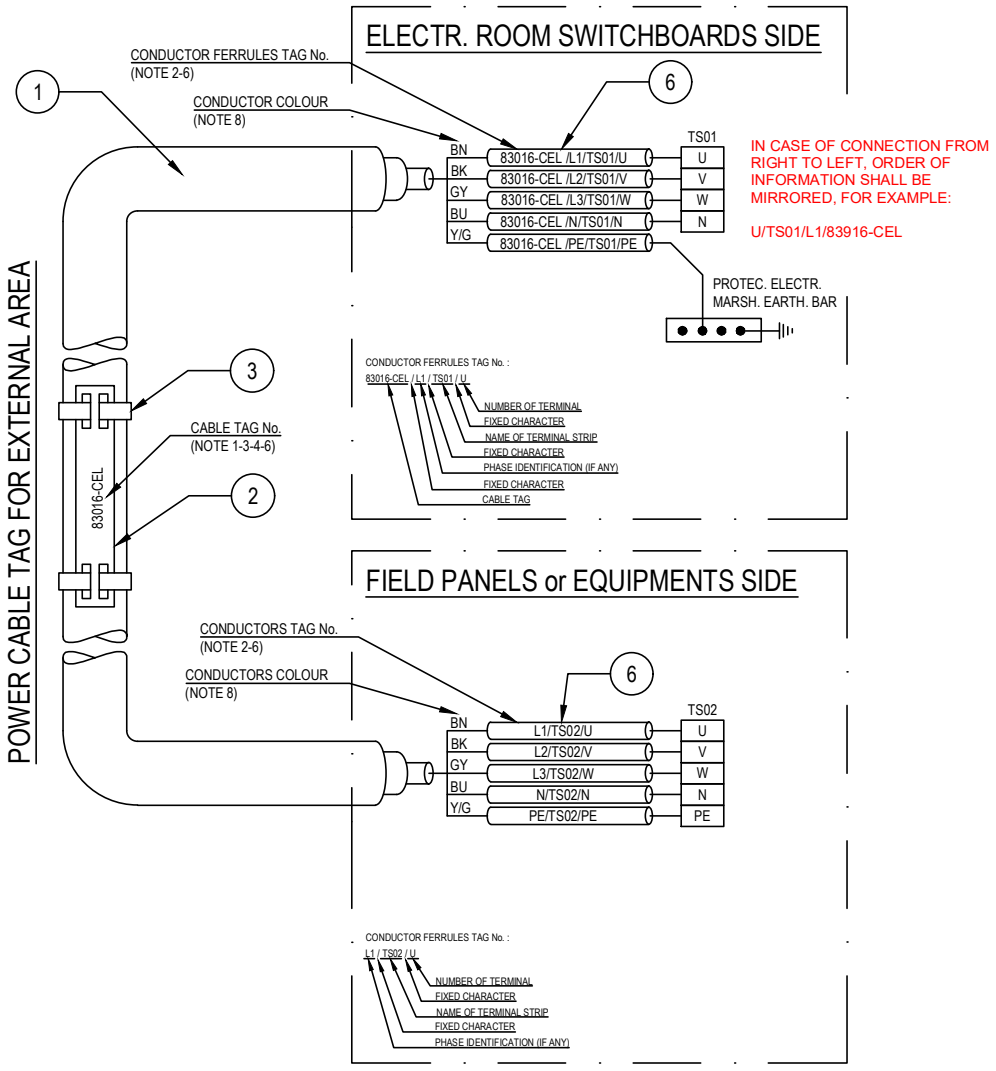
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

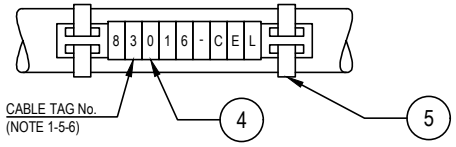
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

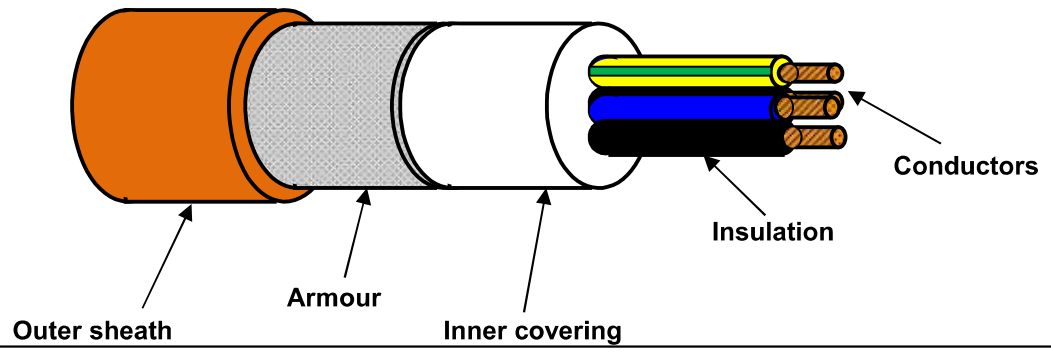
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-11	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-09	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-11	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-045

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-10	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000725		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-11 To EJB-200N1-08-L1-10

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-10	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000725		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

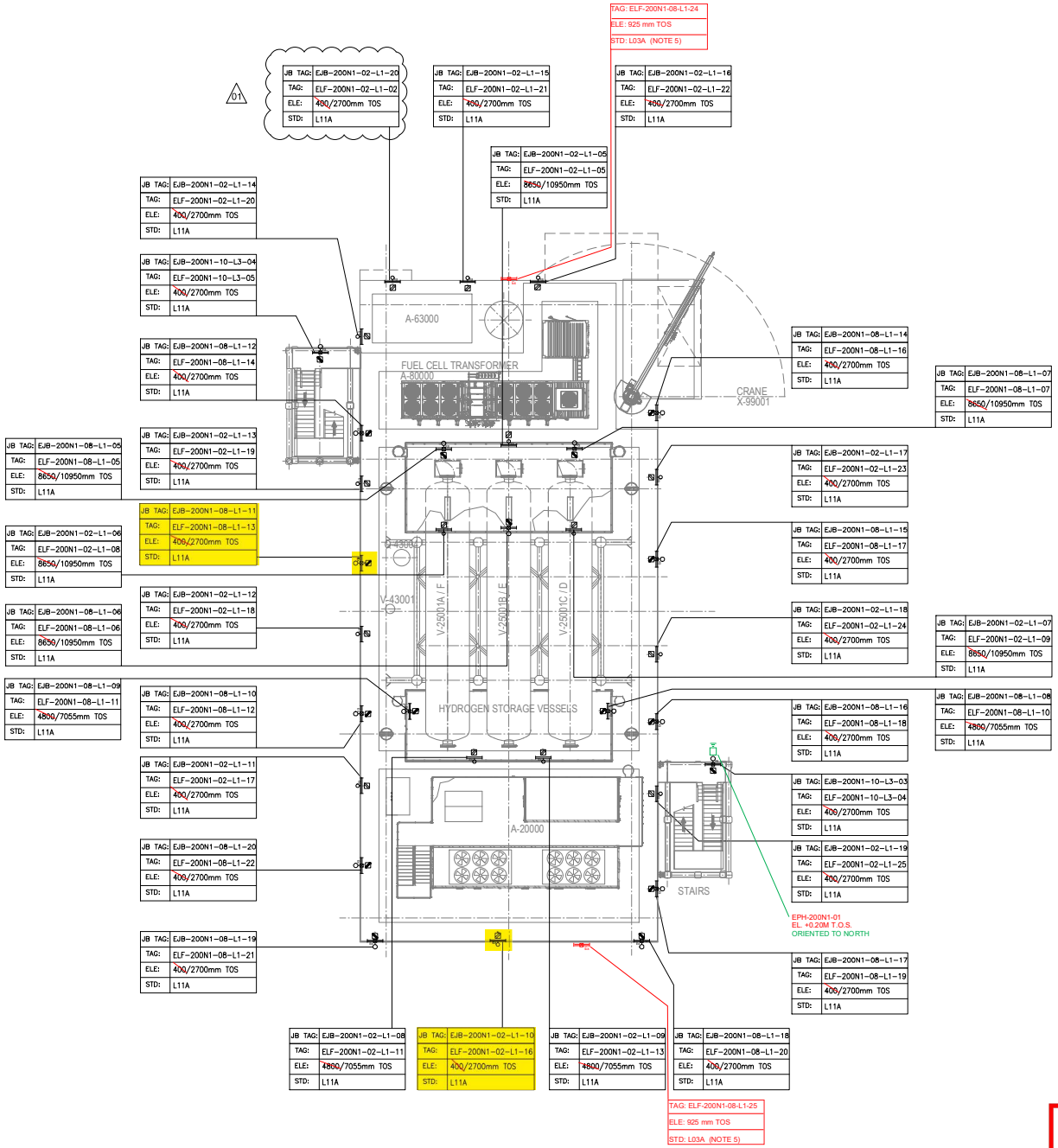
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

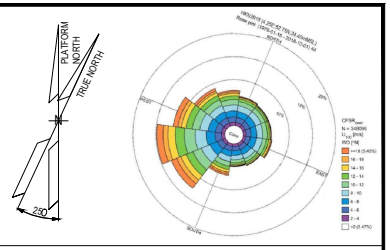
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:11:34.639Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:37:29.020Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

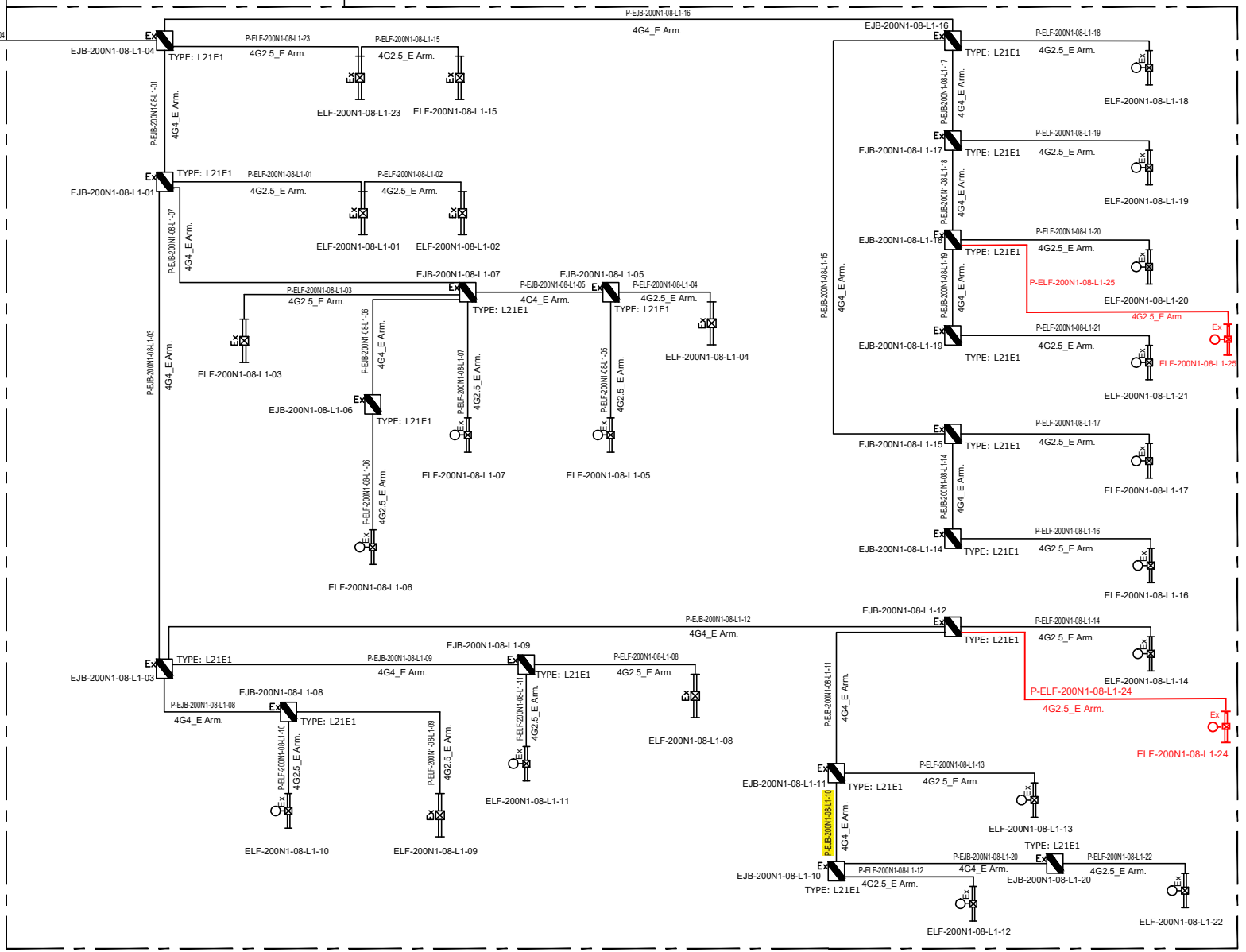
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

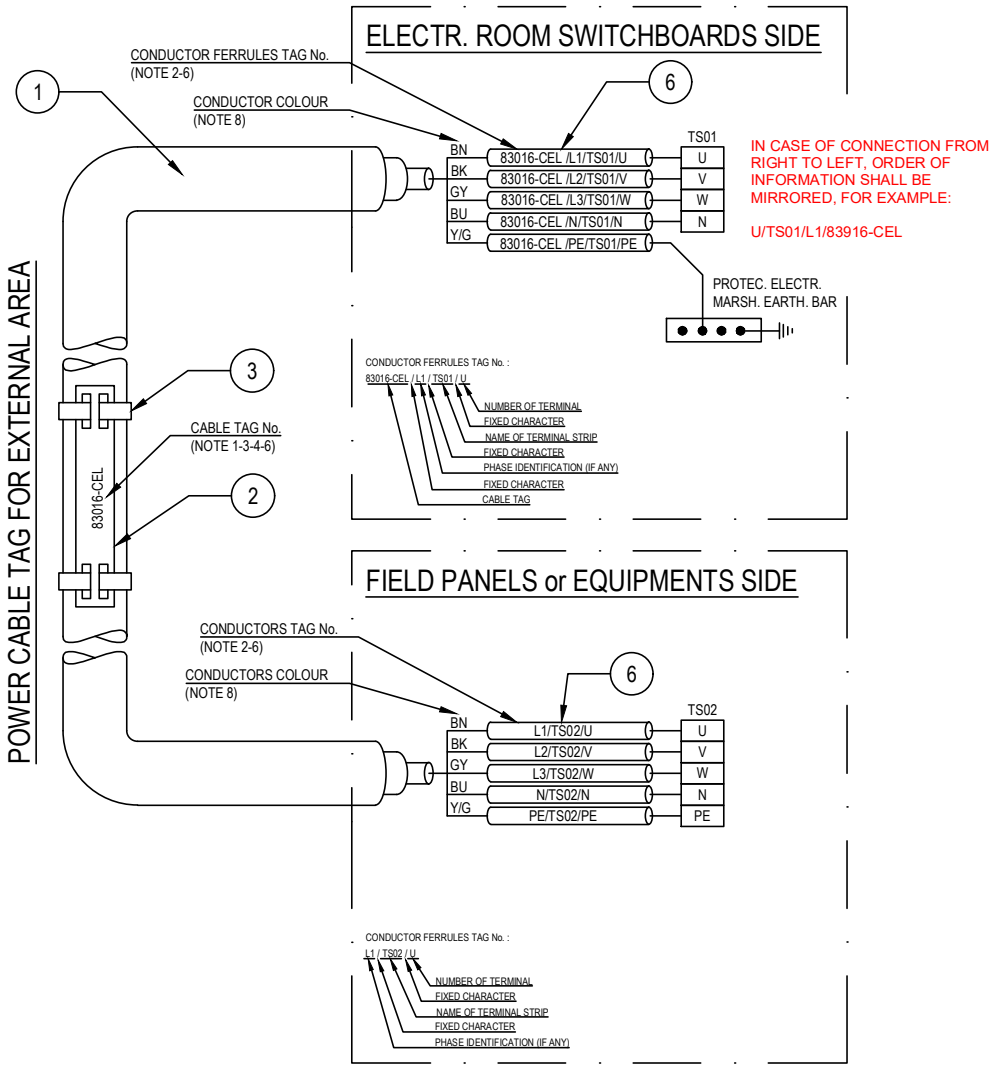
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

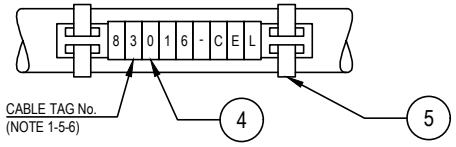
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

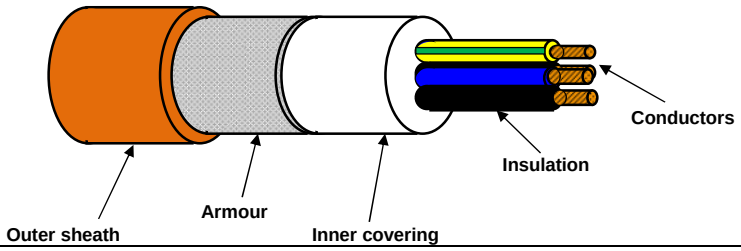
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-10	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-11	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-10	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-006

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-ELF-200N1-08-L1-12	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000726		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-10 To ELF-200N1-08-L1-12

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-12	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000726		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

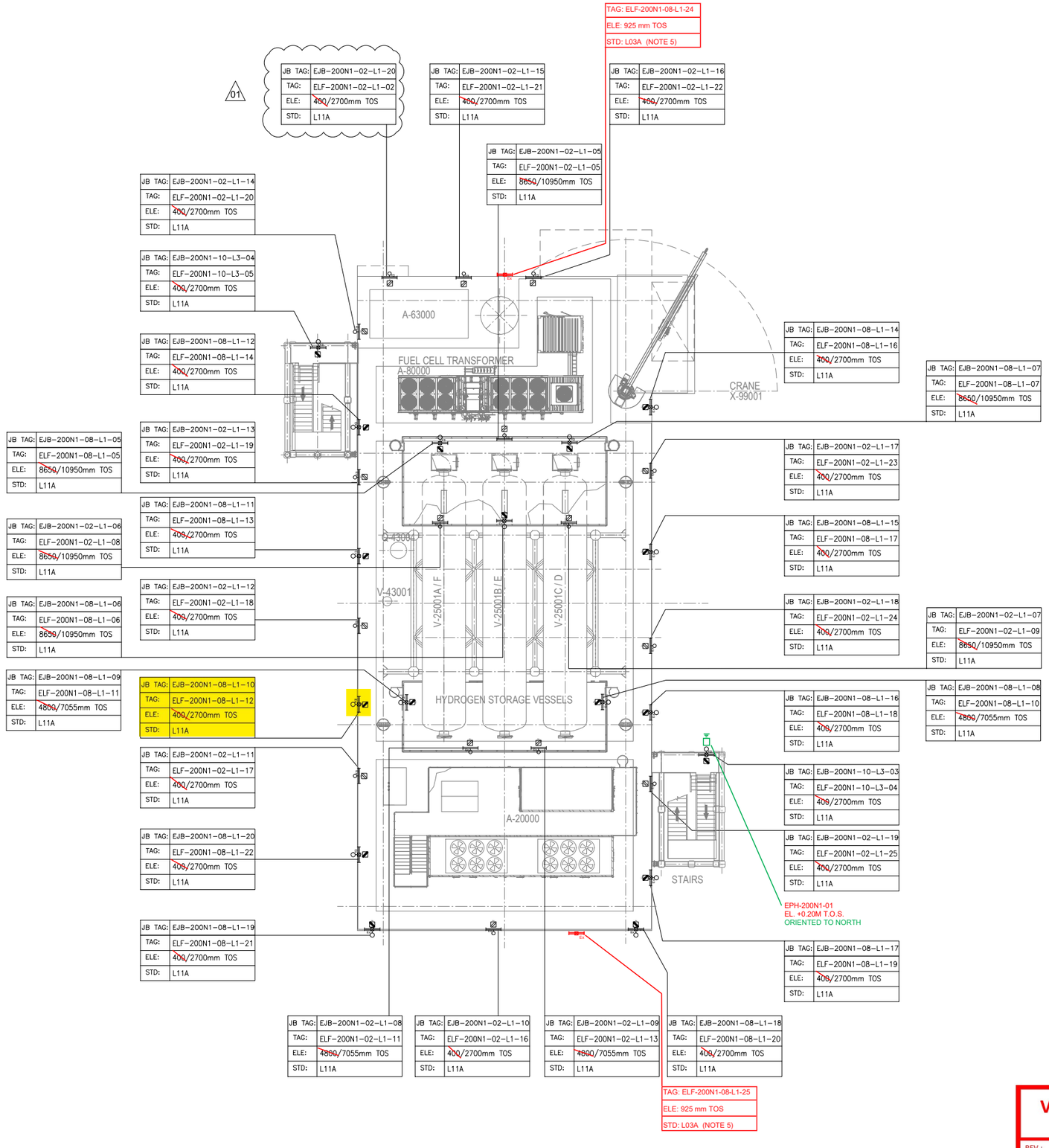
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

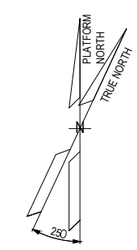
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Andrea Andreani	
Date	2024-11-22	2025-01-22	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:19:10.155Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-22T17:15:32.016Z	

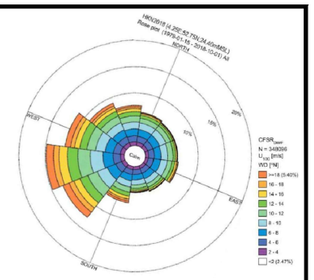
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

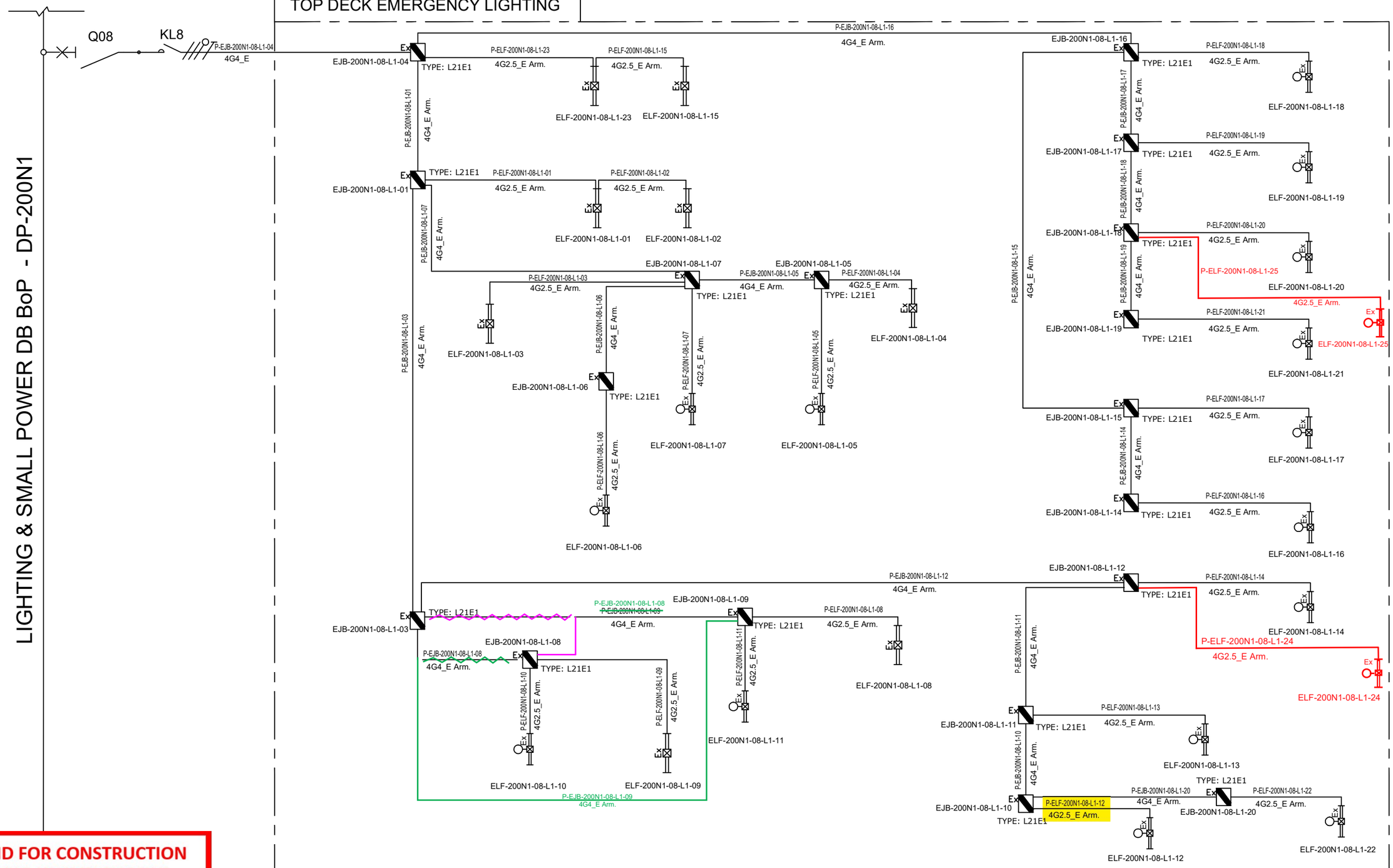
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

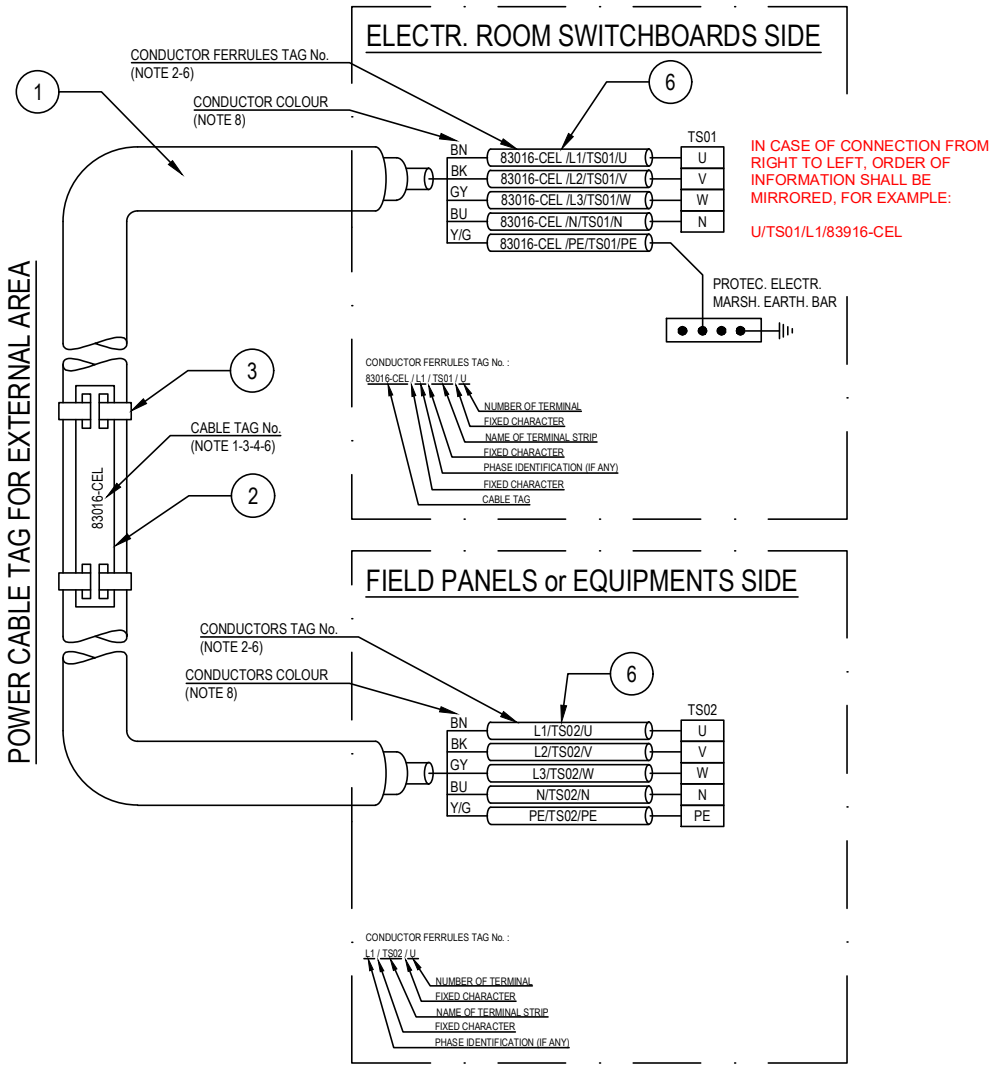
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

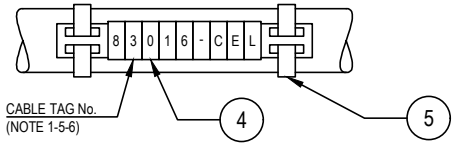
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

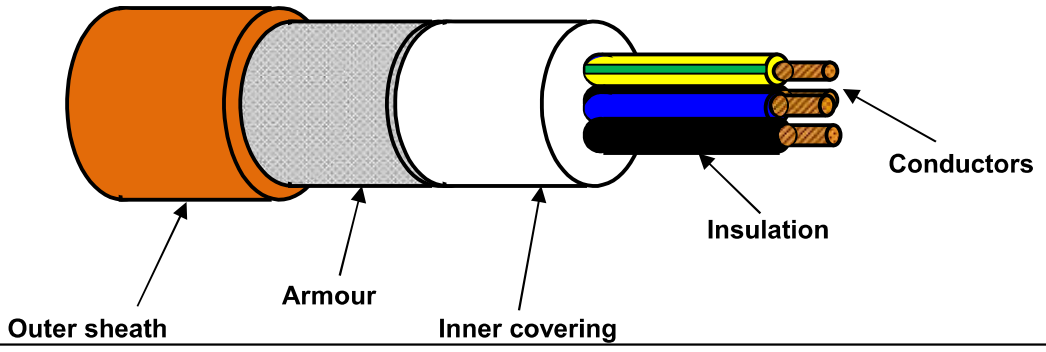
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-12	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-10	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-12	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-031

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-EJB-200N1-08-L1-11	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000727		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-12 To EJB-200N1-08-L1-11

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ITEM	Tag	P-EJB-200N1-08-L1-11	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000727		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

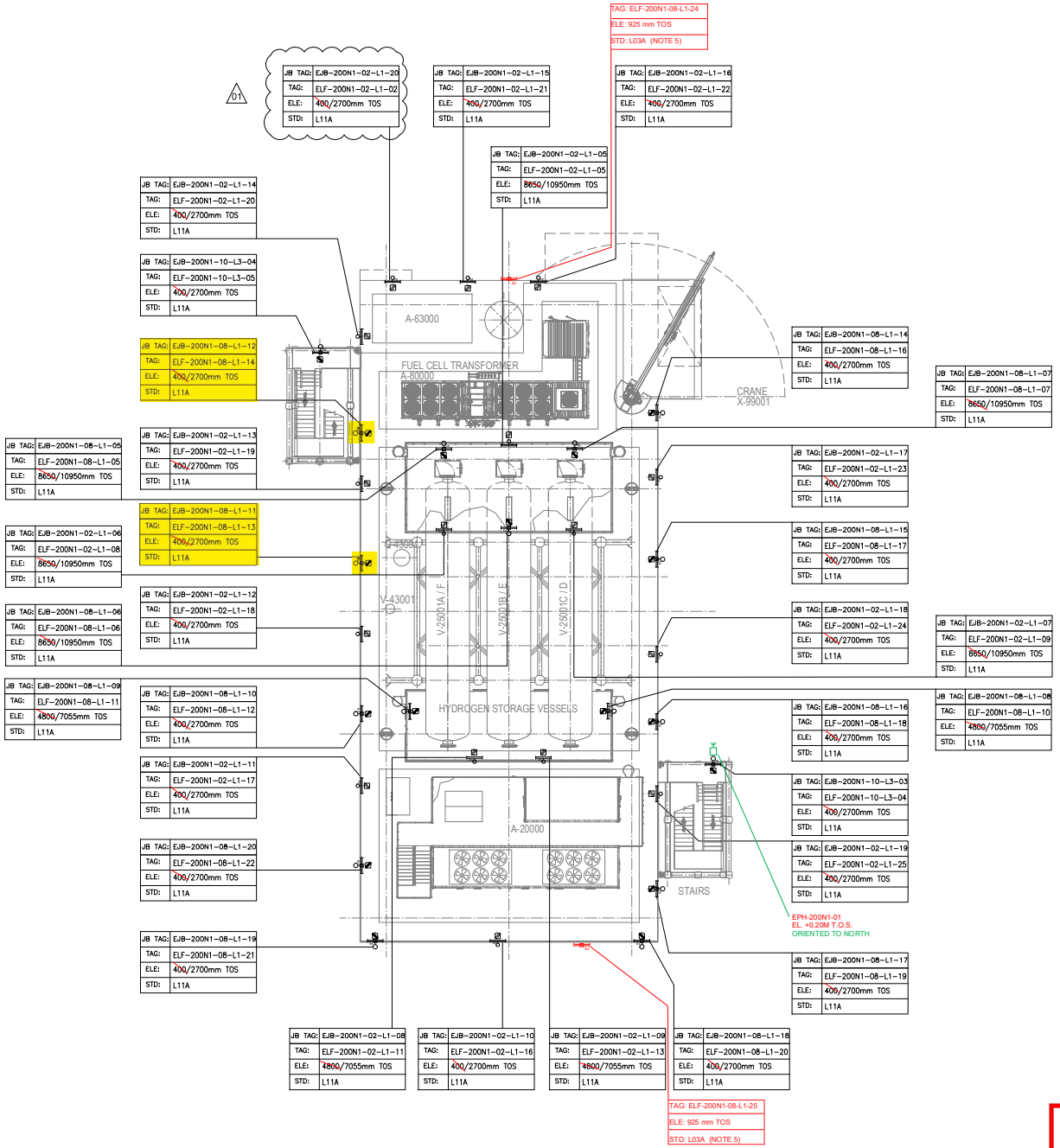
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

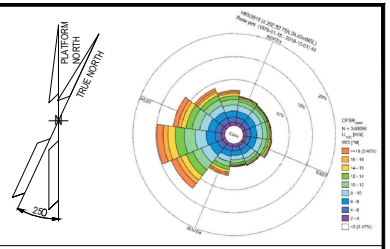
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:11:51.476Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:38:39.792Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

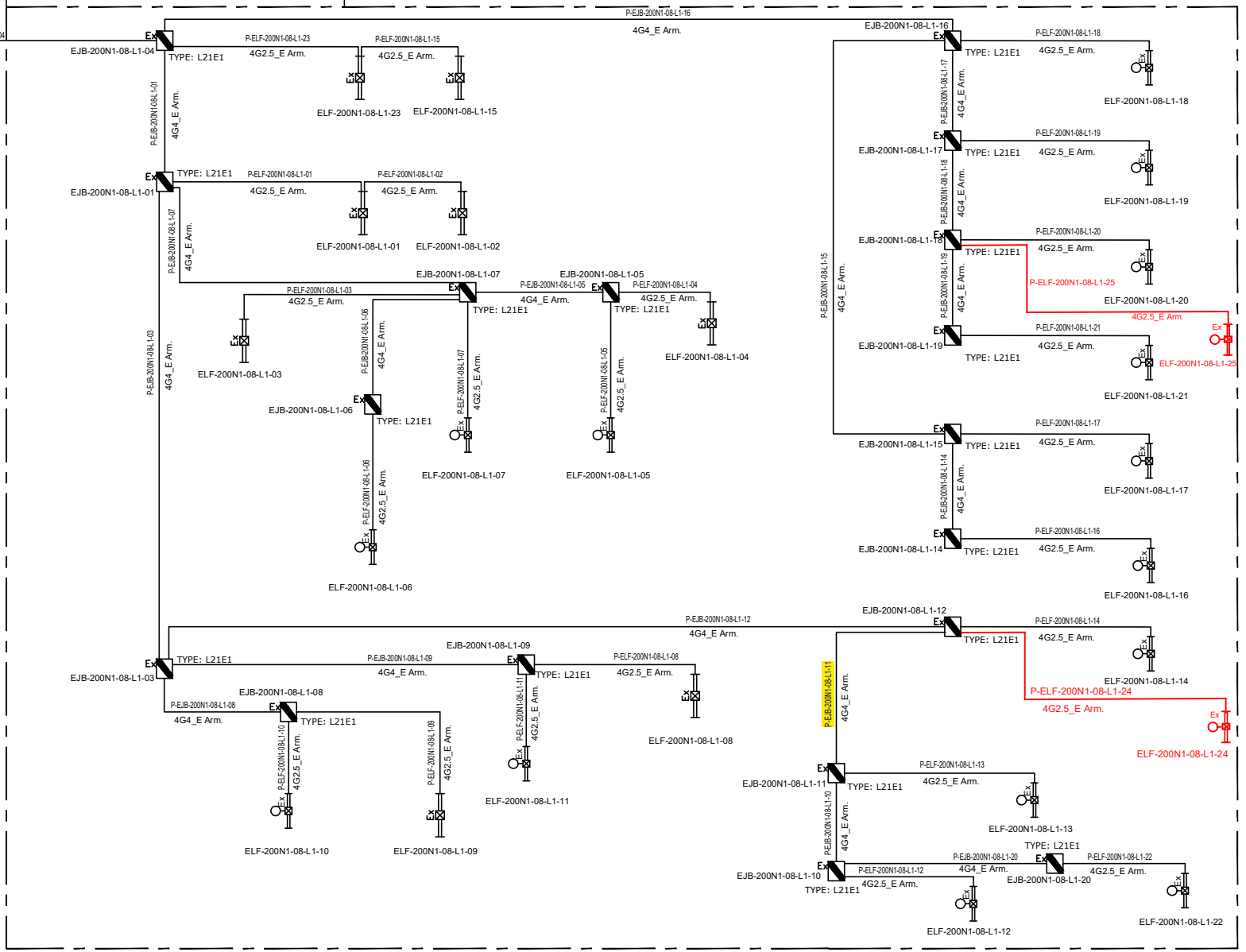
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

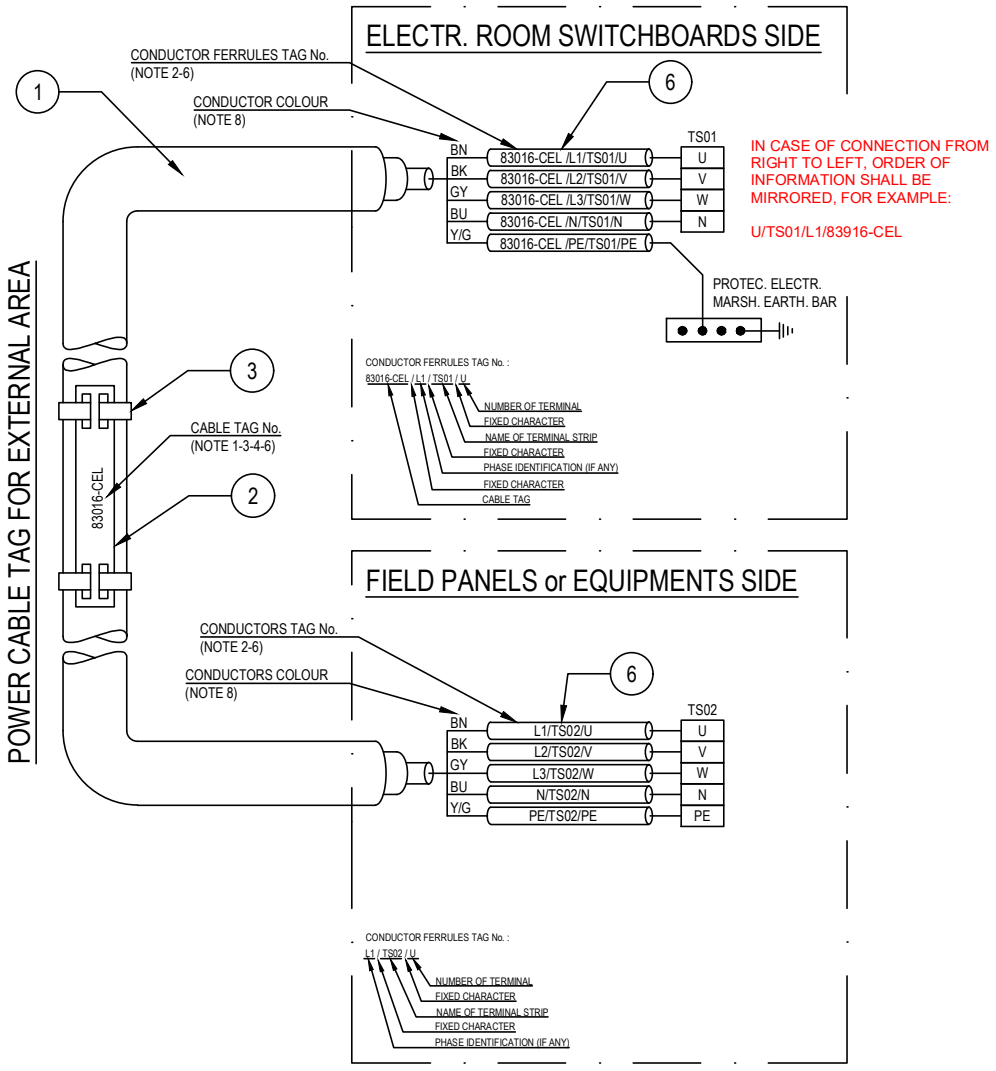
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

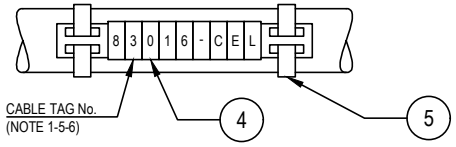
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

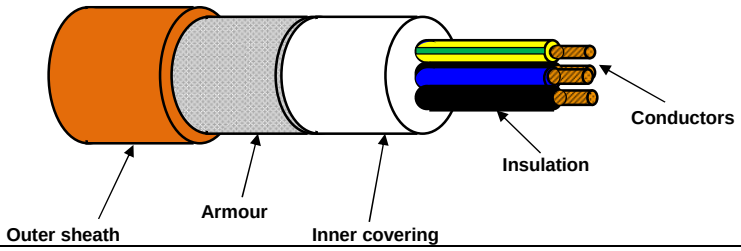
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-11	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-12	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-11	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-005 / L-150-102-LVT-006

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-13	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000728		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-11 To ELF-200N1-08-L1-13

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-13	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000728		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

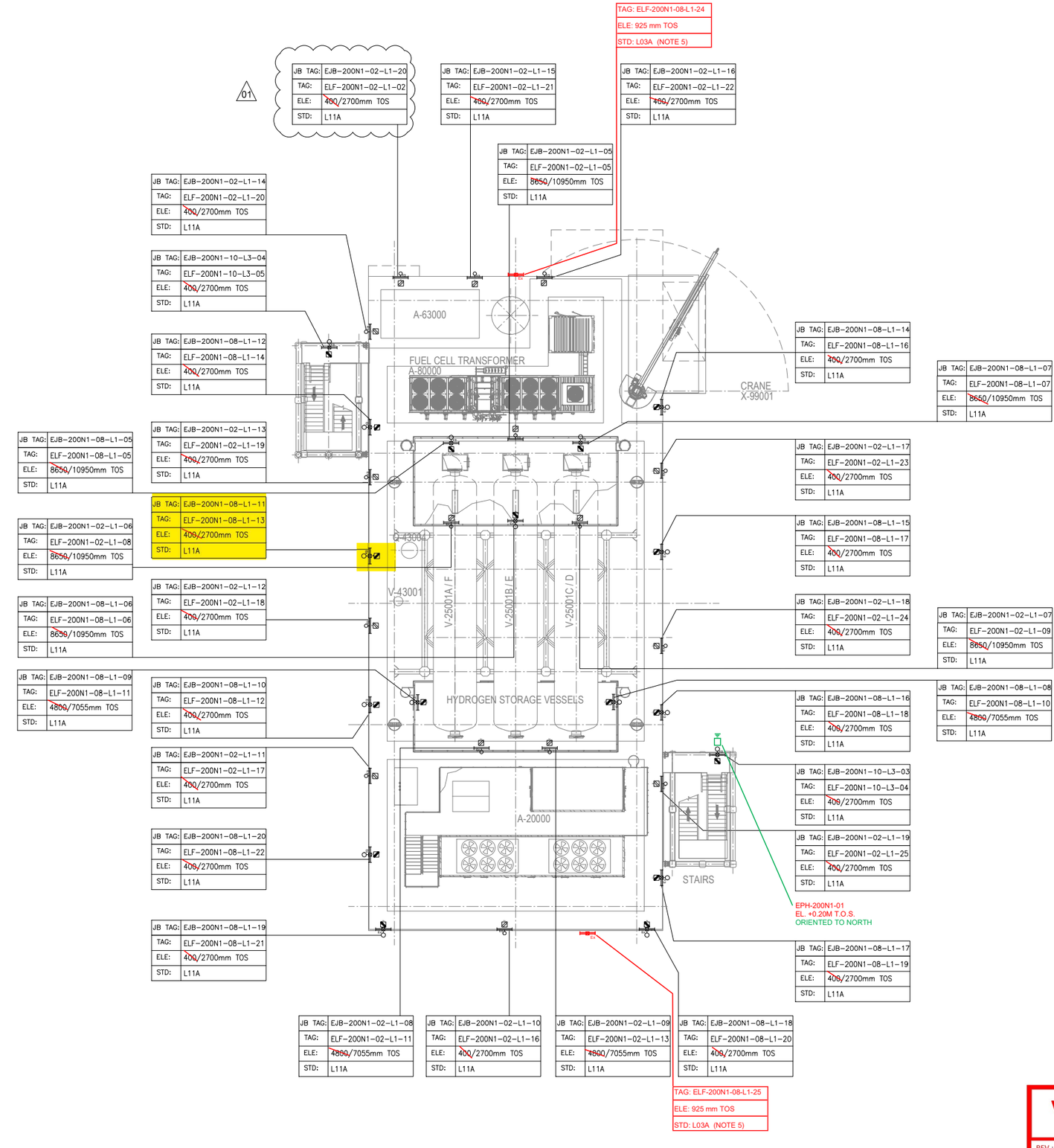
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Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

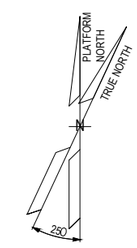
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Andrea Andreani	
Date	2024-11-22	2025-01-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:19:23.899Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-02T15:59:47.695Z	

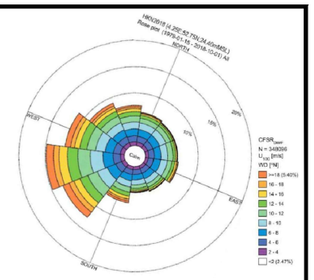
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

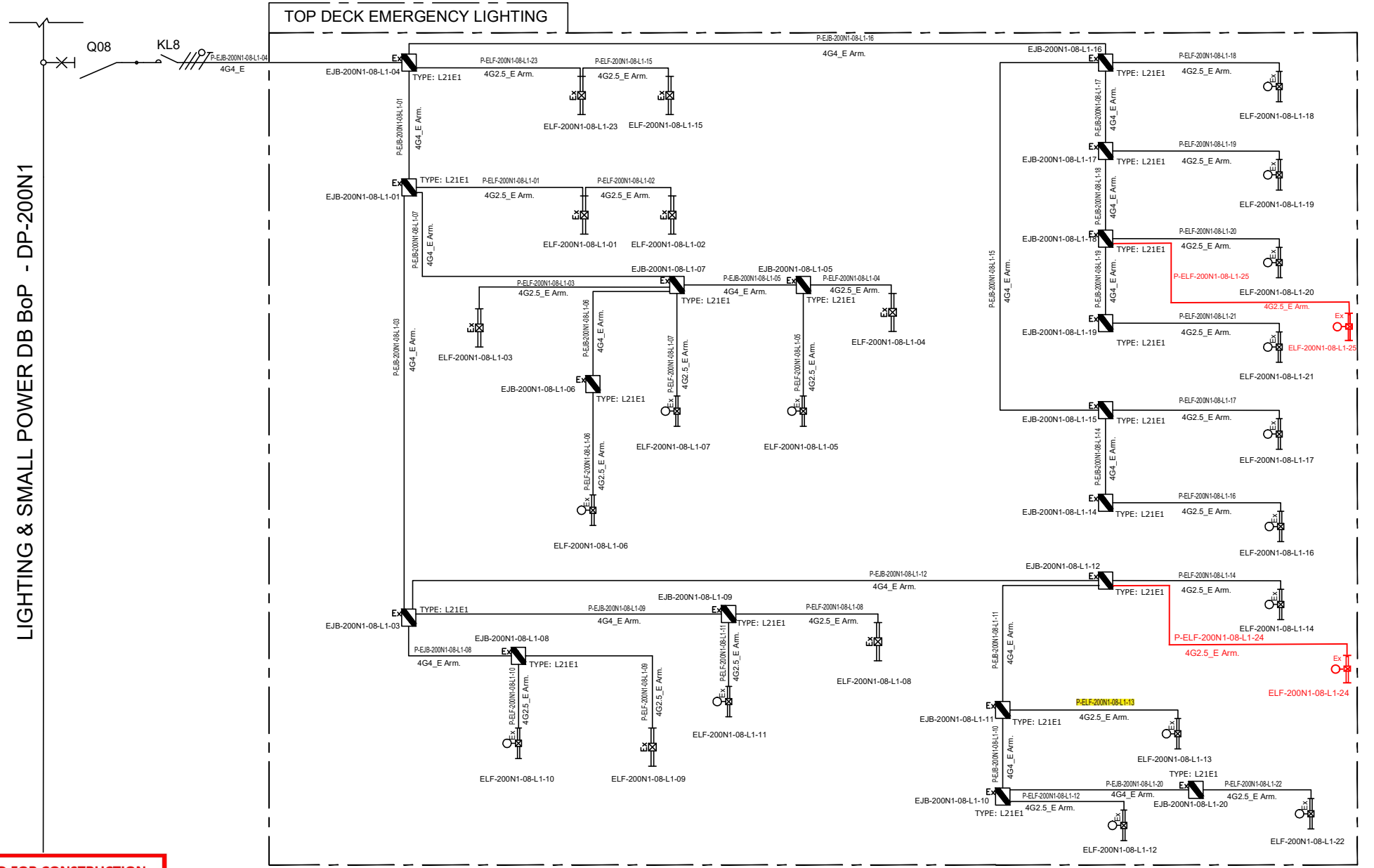
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

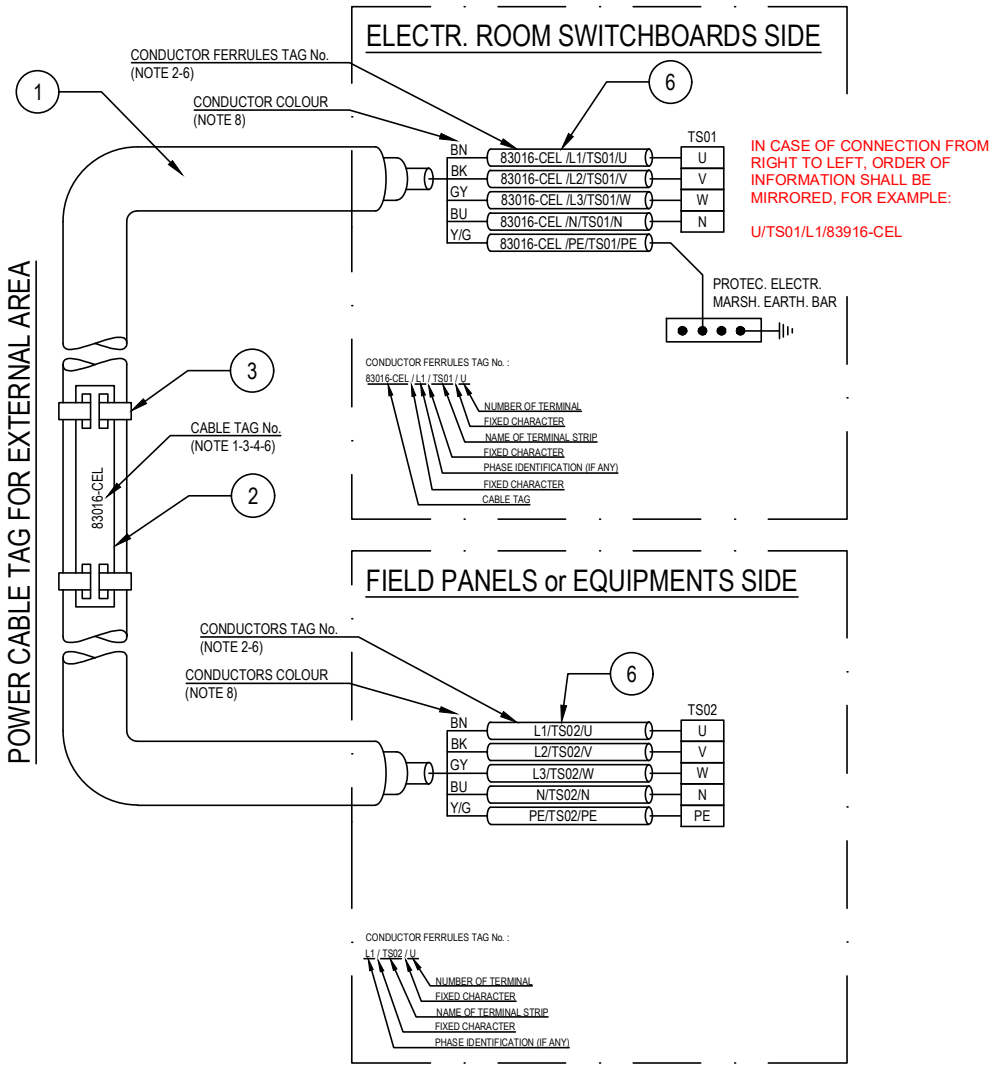
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

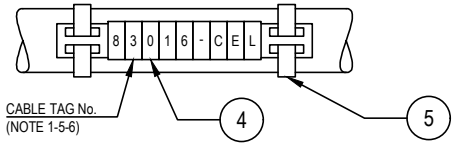
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

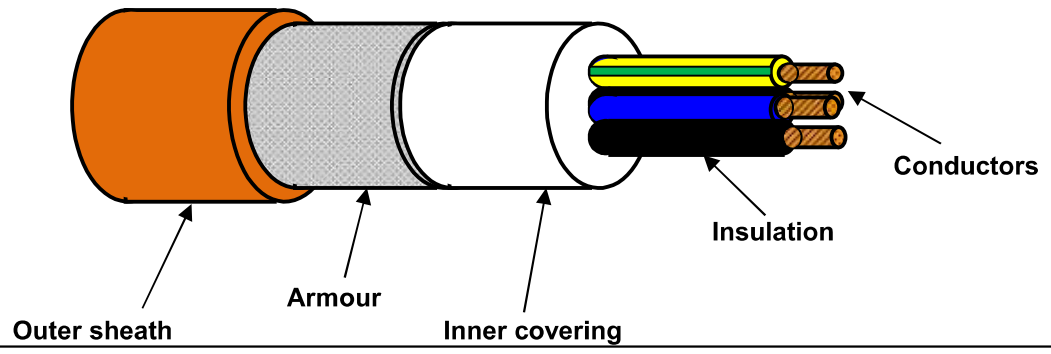
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-13	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-11	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-13	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CL2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-029

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-EJB-200N1-08-L1-12	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000729		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-03 To EJB-200N1-08-L1-12

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-12	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000729		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

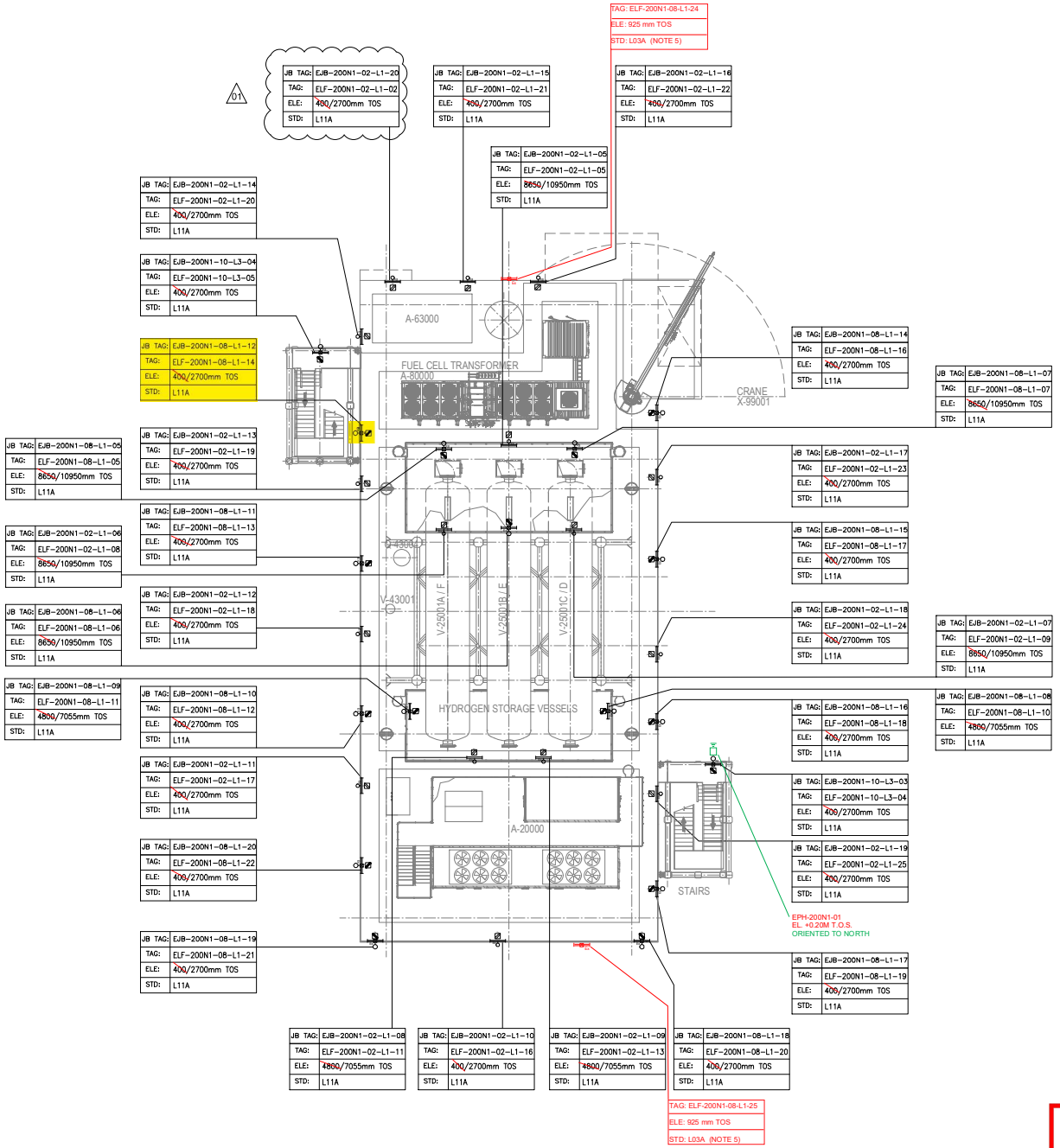
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

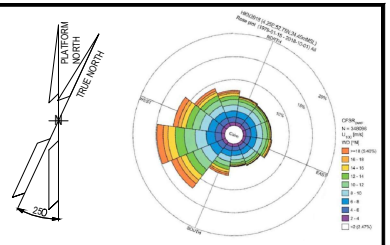
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:12:06.282Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:39:57.390Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

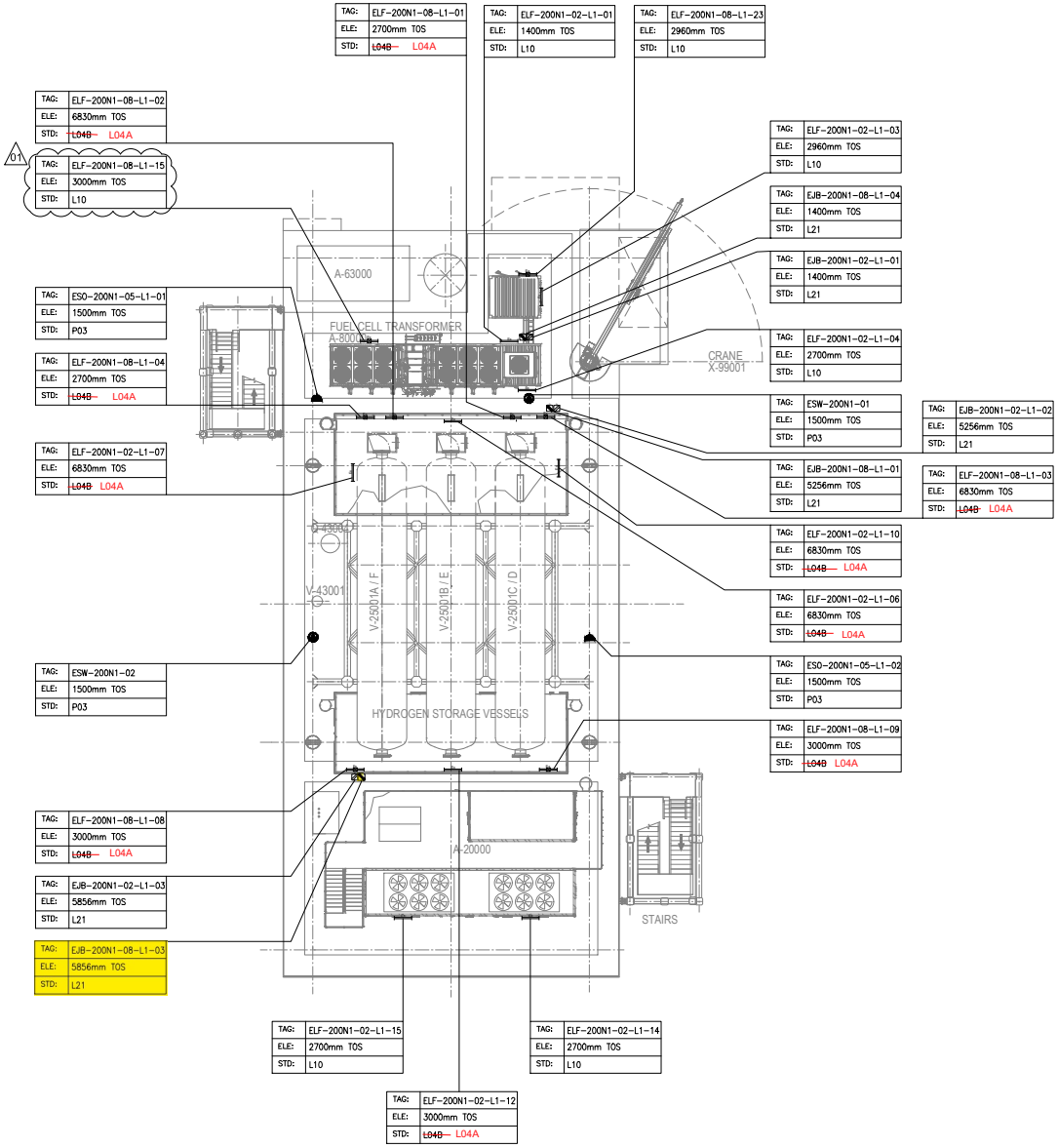
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

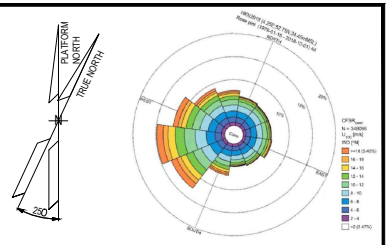
File Name : 123A90-DDL-EL-DL-20118

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
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3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

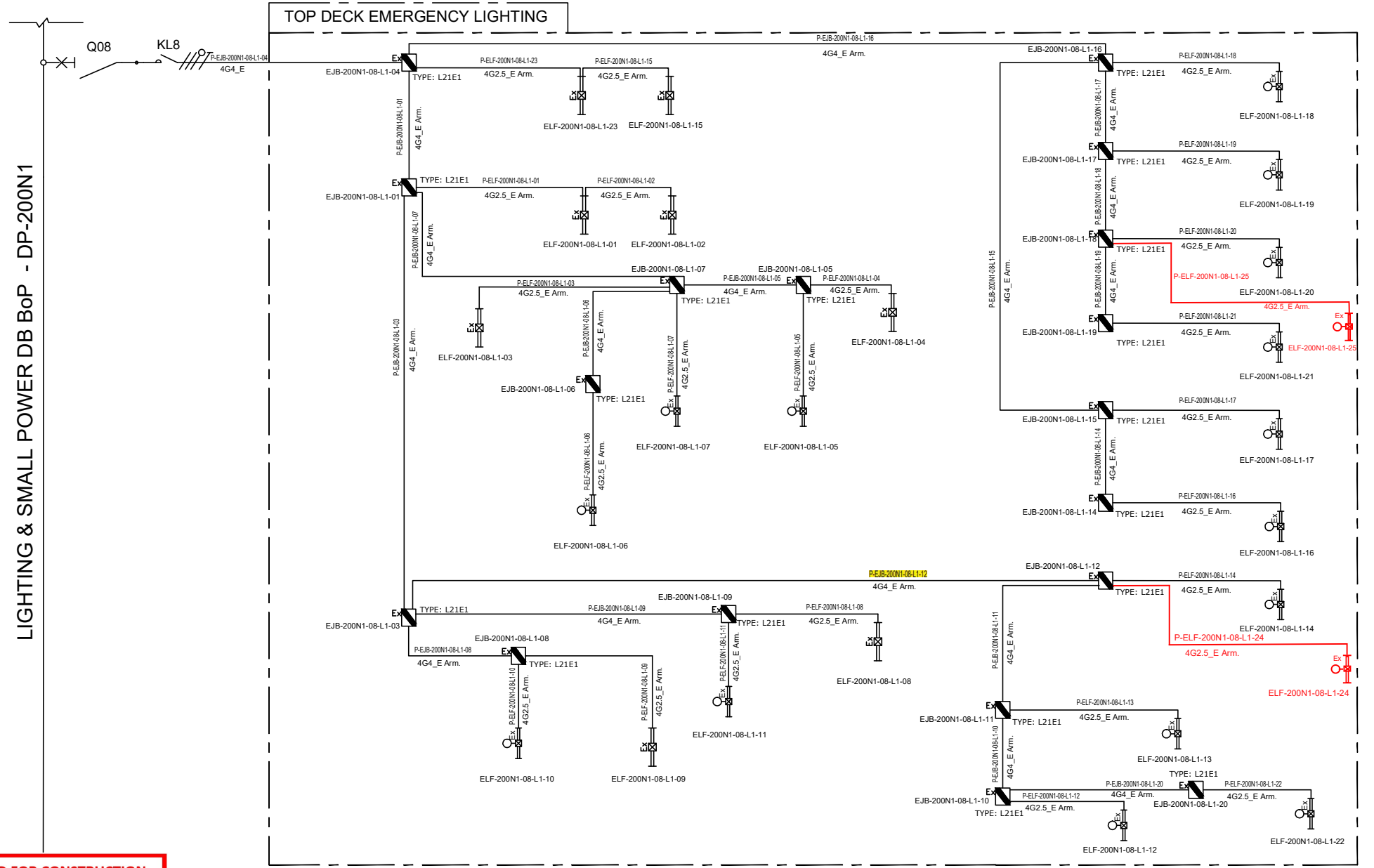
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

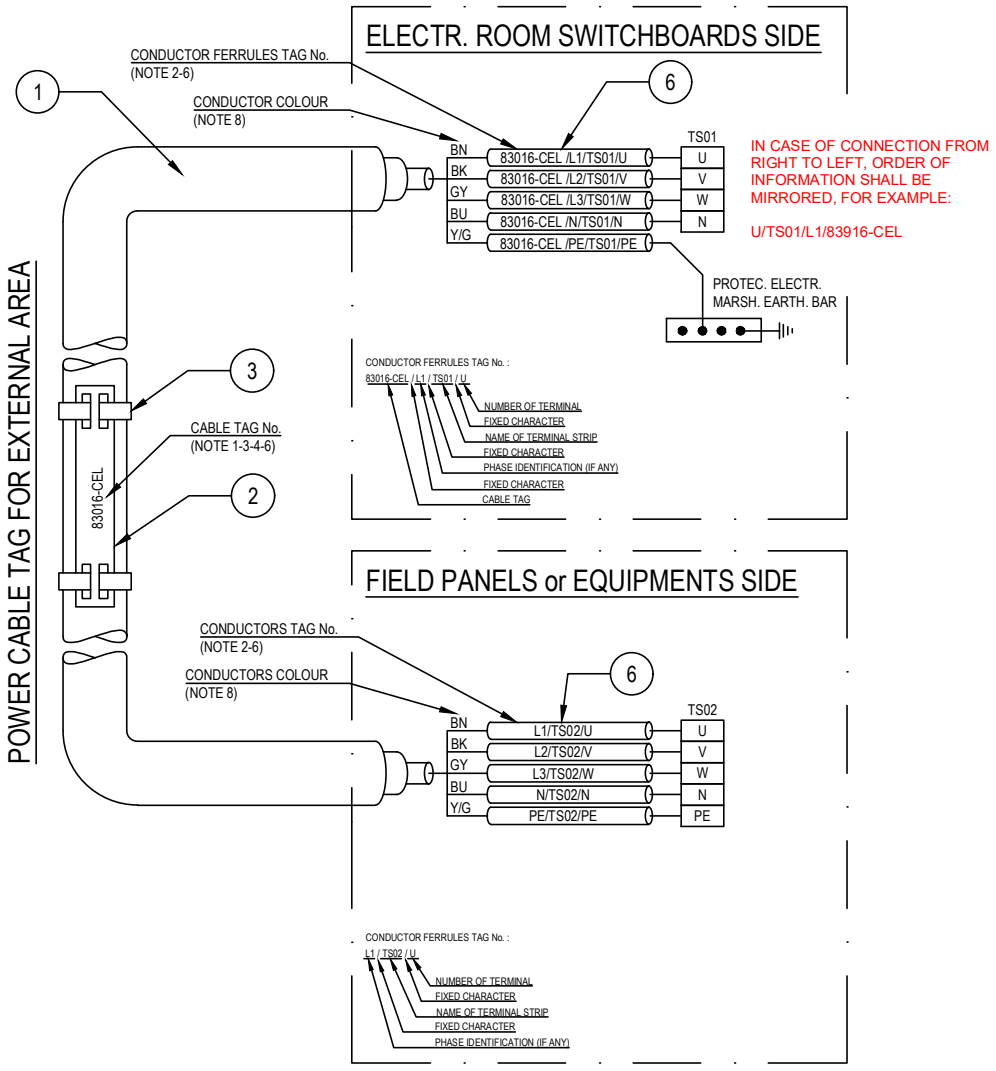
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

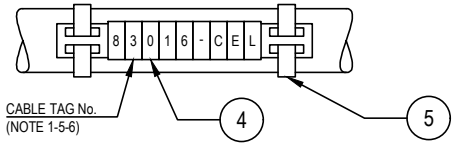
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

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ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

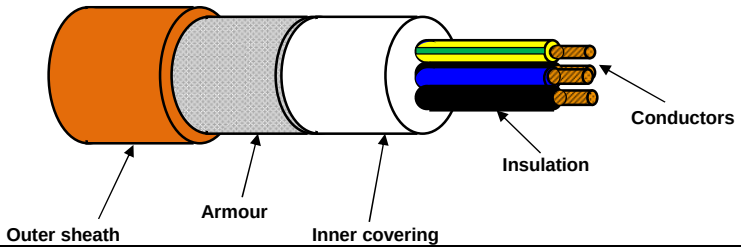
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-12	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-03	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-12	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CL2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-013 / L-150-102-LVT-008 / L-150-102-LVT-007 / E-MCT-005 / L-150-101-LVT-104 / L-600-101-LVT-012 / L-300-101-LVT-084 / L-150-102-LVT-005

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-14	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000730		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-12 To ELF-200N1-08-L1-14

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-14	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000730		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

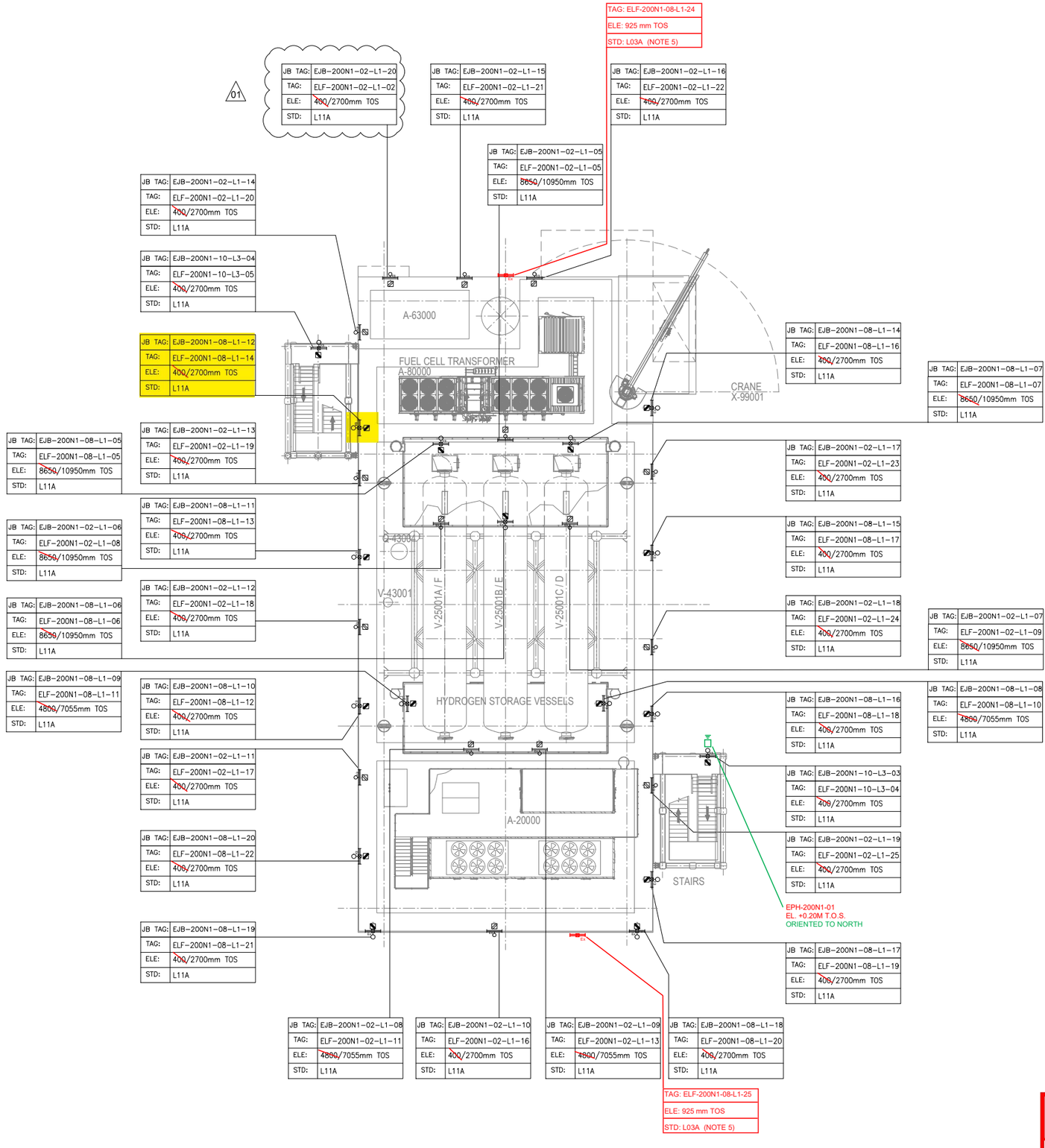
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

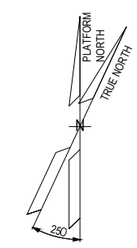
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-28	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-28T07:30:20.044Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T10:59:00.557Z	

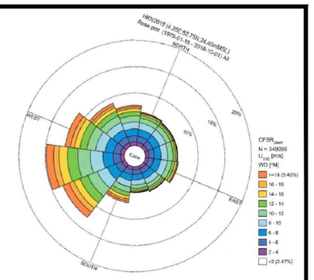
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
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123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

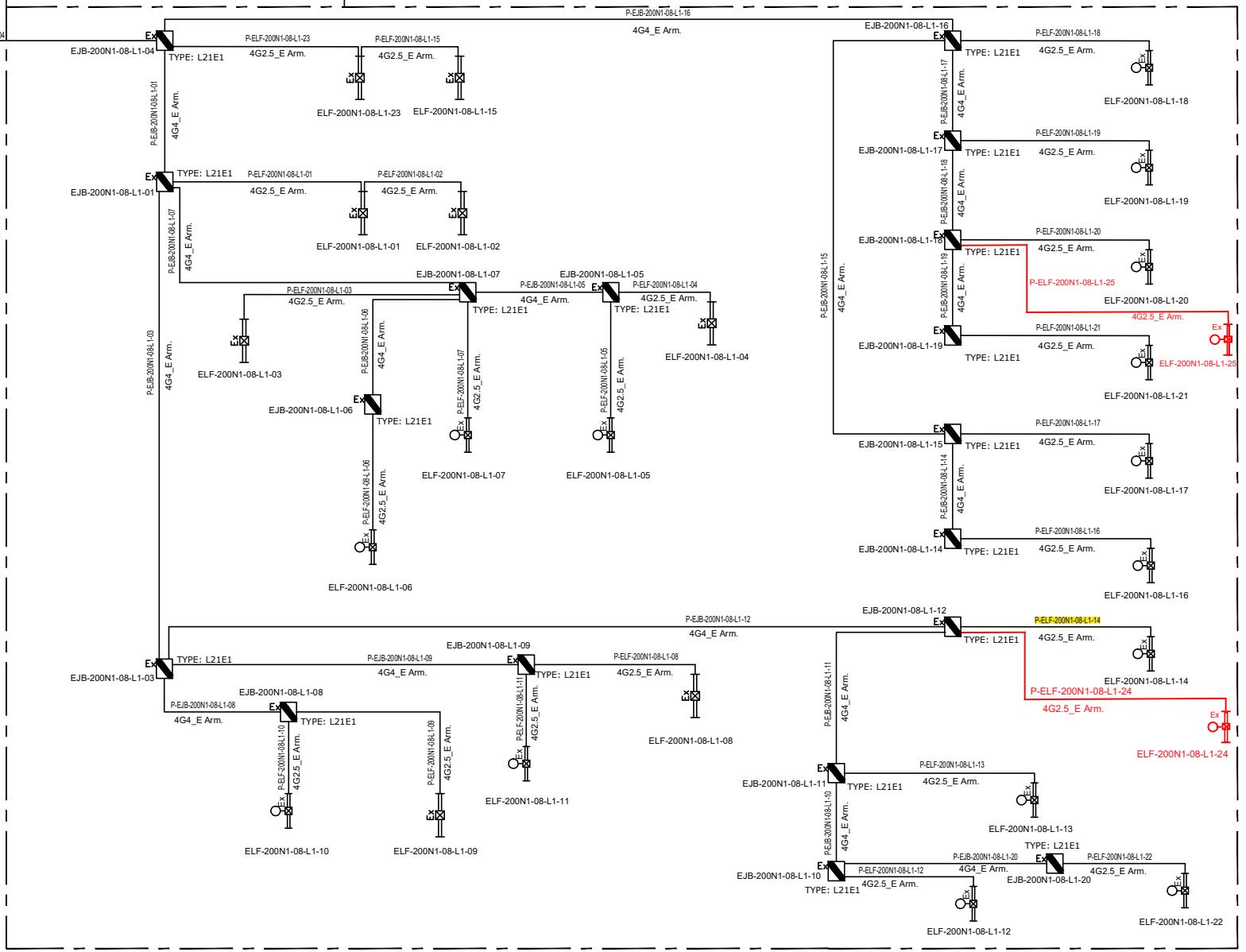
CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

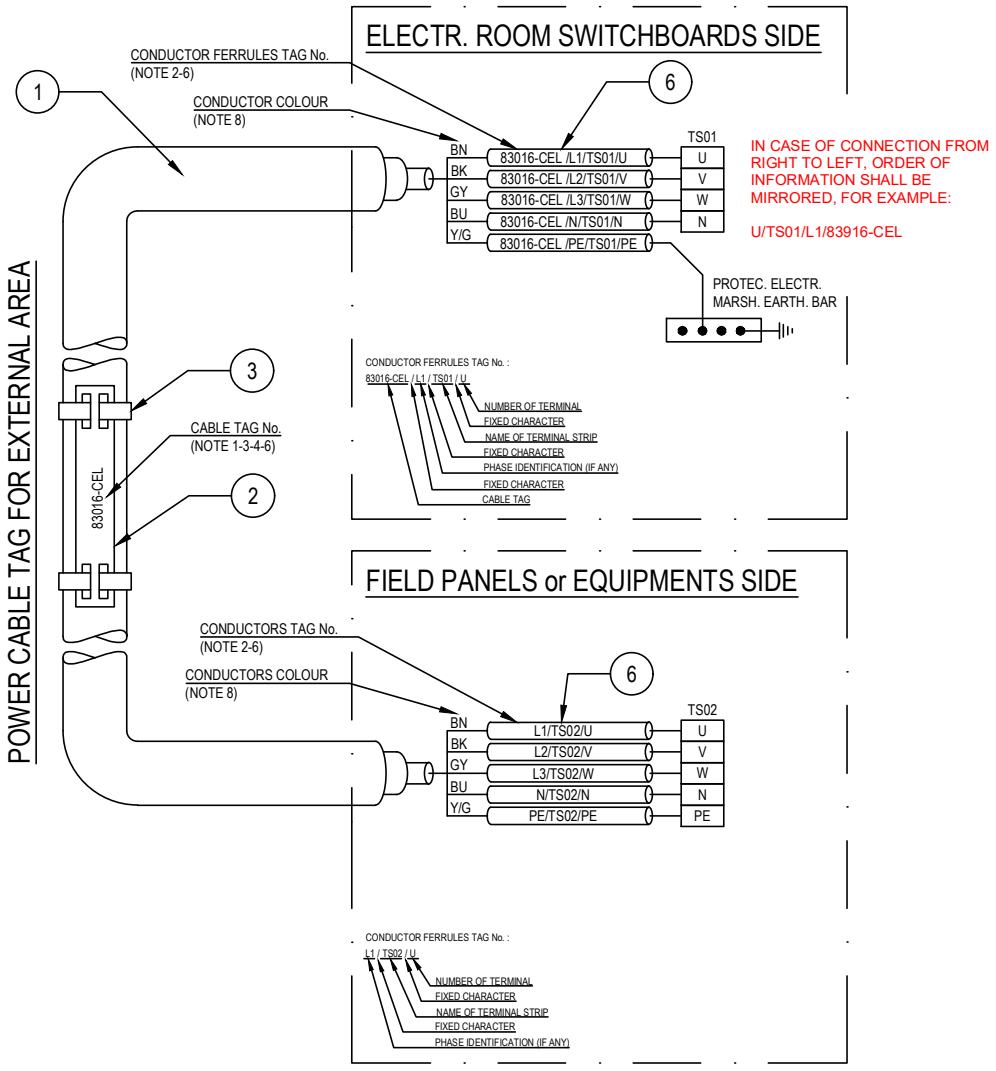
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
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5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

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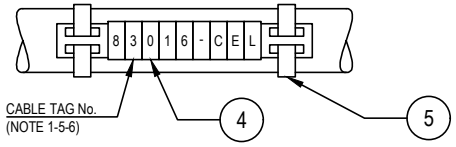
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- EARTH BAR AND EARTH BOSS

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POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

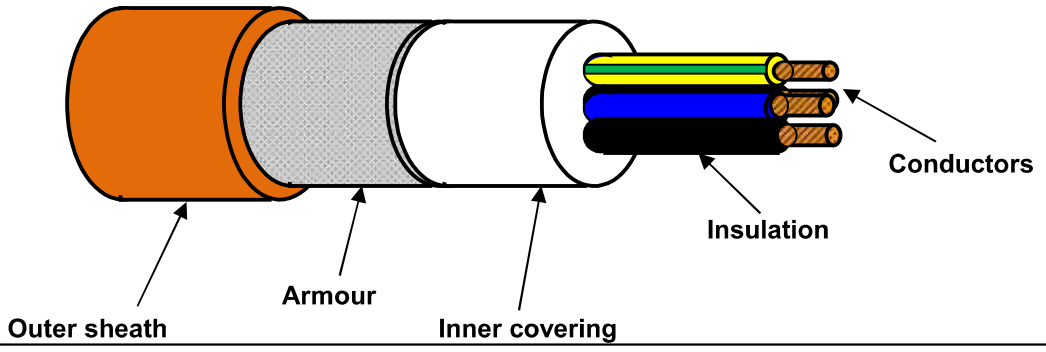
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-14	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-12	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-14	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CL2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-027

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-15	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000732		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From ELF-200N1-08-L1-23 To ELF-200N1-08-L1-15

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-15	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000732		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,16	
6		PH 2	0,16	
7		PH 3	0,16	
8	ARMOUR CONTINUITY Ω		0,16	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,16	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

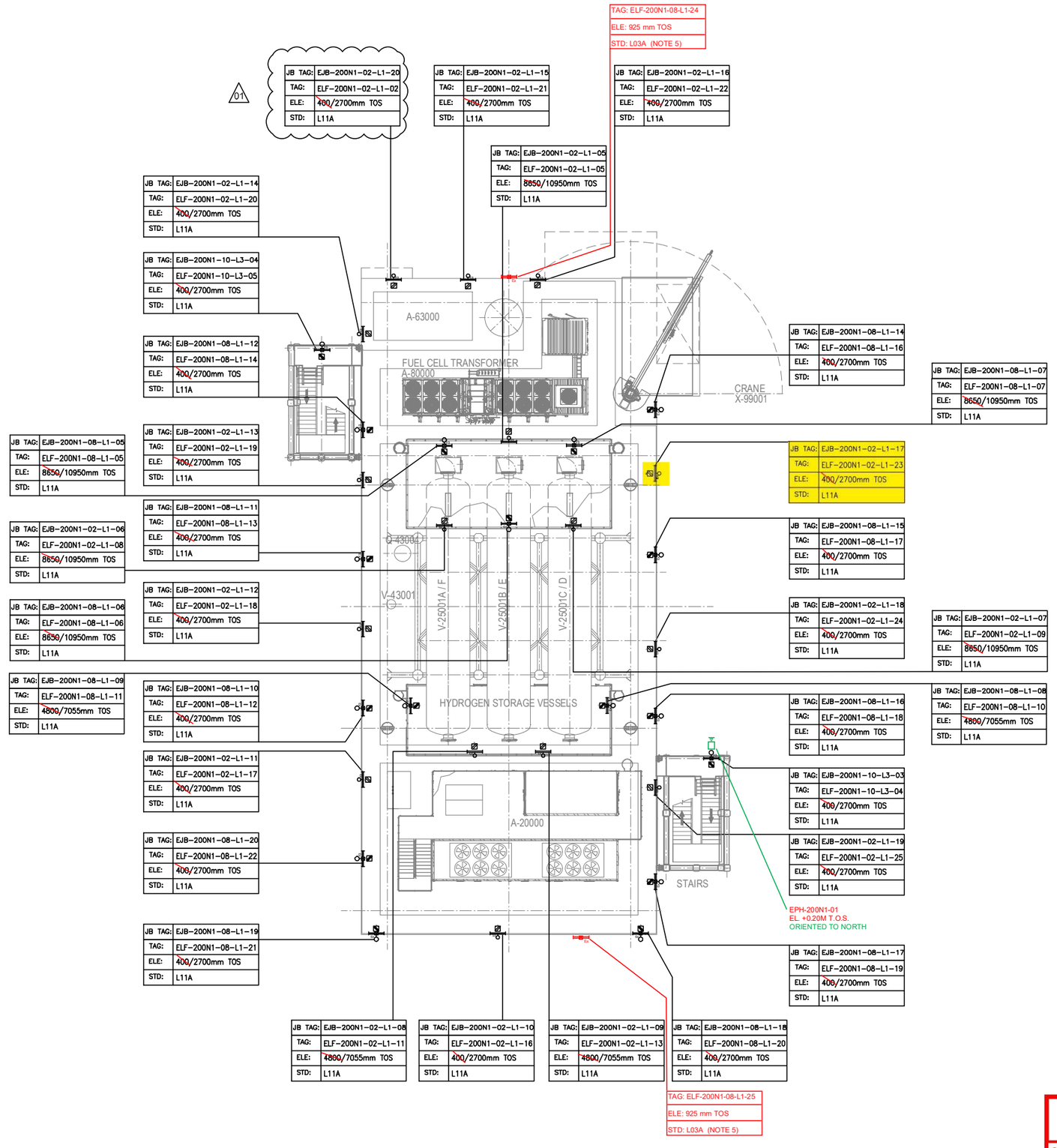
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-08	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:16:19.962Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-15T16:14:48.480Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



JB TAG:	EJB-200N1-02-L1-20
TAG:	ELF-200N1-02-L1-02
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-15
TAG:	ELF-200N1-02-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-16
TAG:	ELF-200N1-02-L1-22
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-05
TAG:	ELF-200N1-02-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-14
TAG:	ELF-200N1-02-L1-20
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-04
TAG:	ELF-200N1-10-L3-05
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-12
TAG:	ELF-200N1-08-L1-14
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-14
TAG:	ELF-200N1-08-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-07
TAG:	ELF-200N1-08-L1-07
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-13
TAG:	ELF-200N1-02-L1-19
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-05
TAG:	ELF-200N1-08-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-17
TAG:	ELF-200N1-02-L1-23
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-11
TAG:	ELF-200N1-08-L1-13
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-06
TAG:	ELF-200N1-02-L1-08
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-15
TAG:	ELF-200N1-08-L1-17
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-12
TAG:	ELF-200N1-02-L1-18
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-18
TAG:	ELF-200N1-02-L1-24
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-06
TAG:	ELF-200N1-08-L1-06
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-07
TAG:	ELF-200N1-02-L1-09
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-09
TAG:	ELF-200N1-08-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-10
TAG:	ELF-200N1-08-L1-12
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-16
TAG:	ELF-200N1-08-L1-18
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-08
TAG:	ELF-200N1-08-L1-10
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-11
TAG:	ELF-200N1-02-L1-17
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-03
TAG:	ELF-200N1-10-L3-04
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-20
TAG:	ELF-200N1-08-L1-22
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-19
TAG:	ELF-200N1-02-L1-25
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-19
TAG:	ELF-200N1-08-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-17
TAG:	ELF-200N1-08-L1-19
ELE:	400/2700mm TOS
STD:	L11A

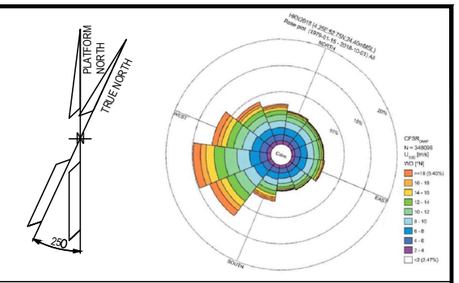
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TAG:	ELF-200N1-02-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-10
TAG:	ELF-200N1-02-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-09
TAG:	ELF-200N1-02-L1-13
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-18
TAG:	ELF-200N1-08-L1-20
ELE:	400/2700mm TOS
STD:	L11A

PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

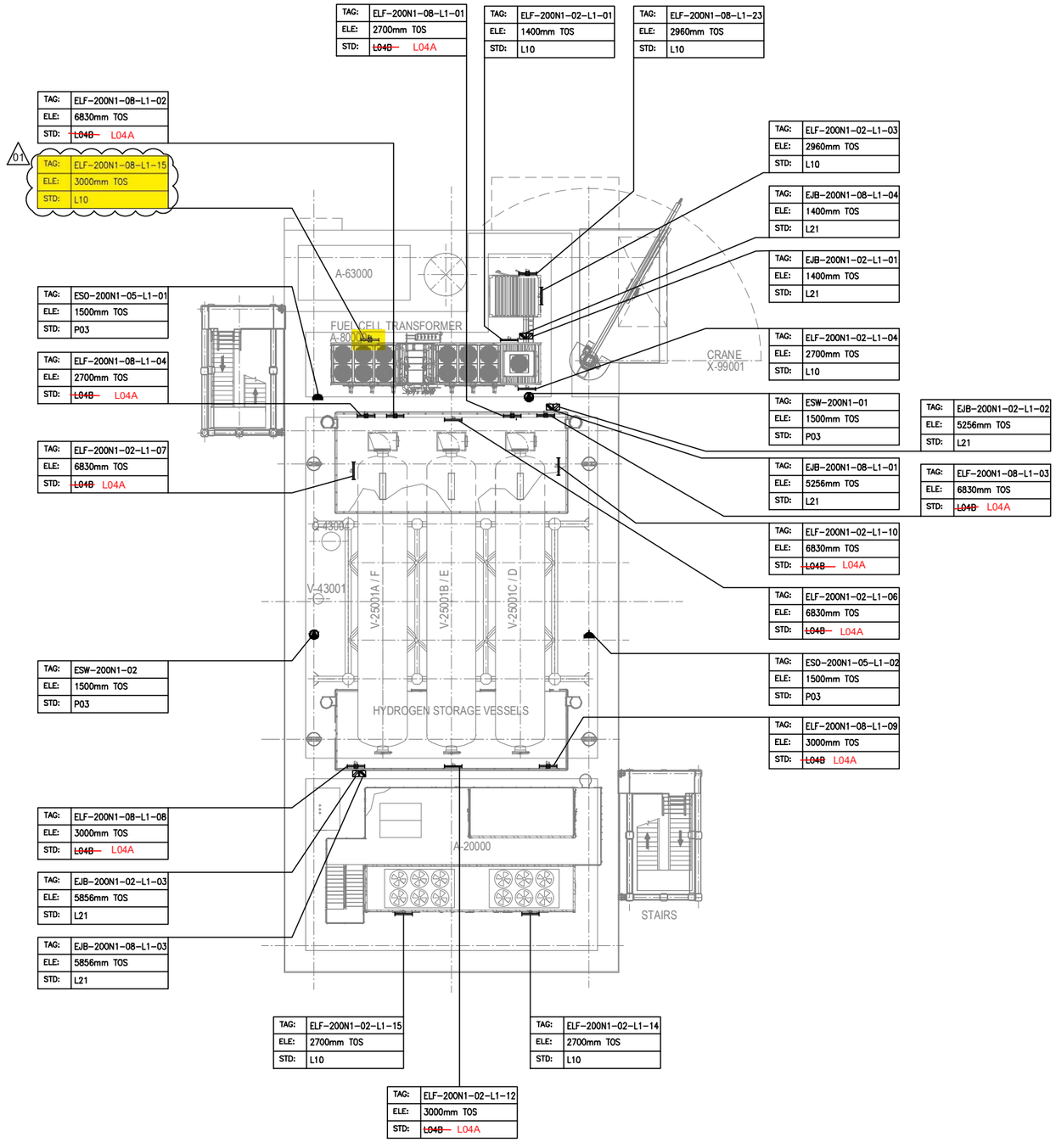
TITLE :
BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

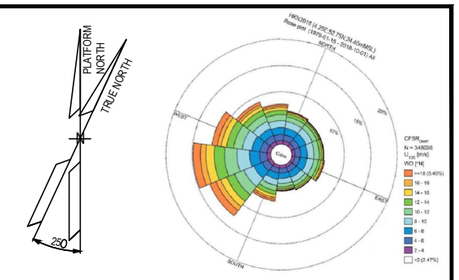
File Name : 123A90-DDL-EL-DL-20118

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

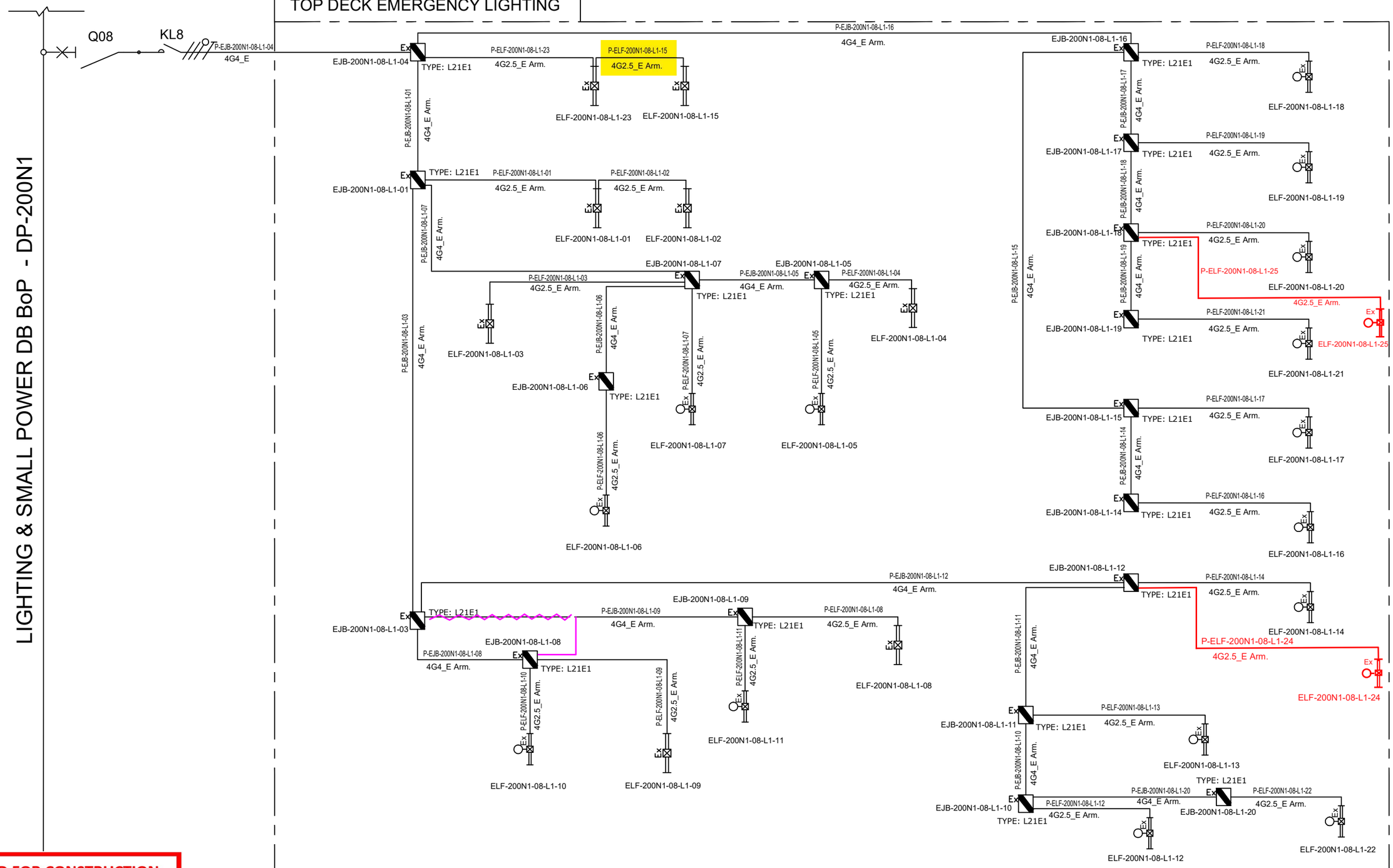
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_E	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

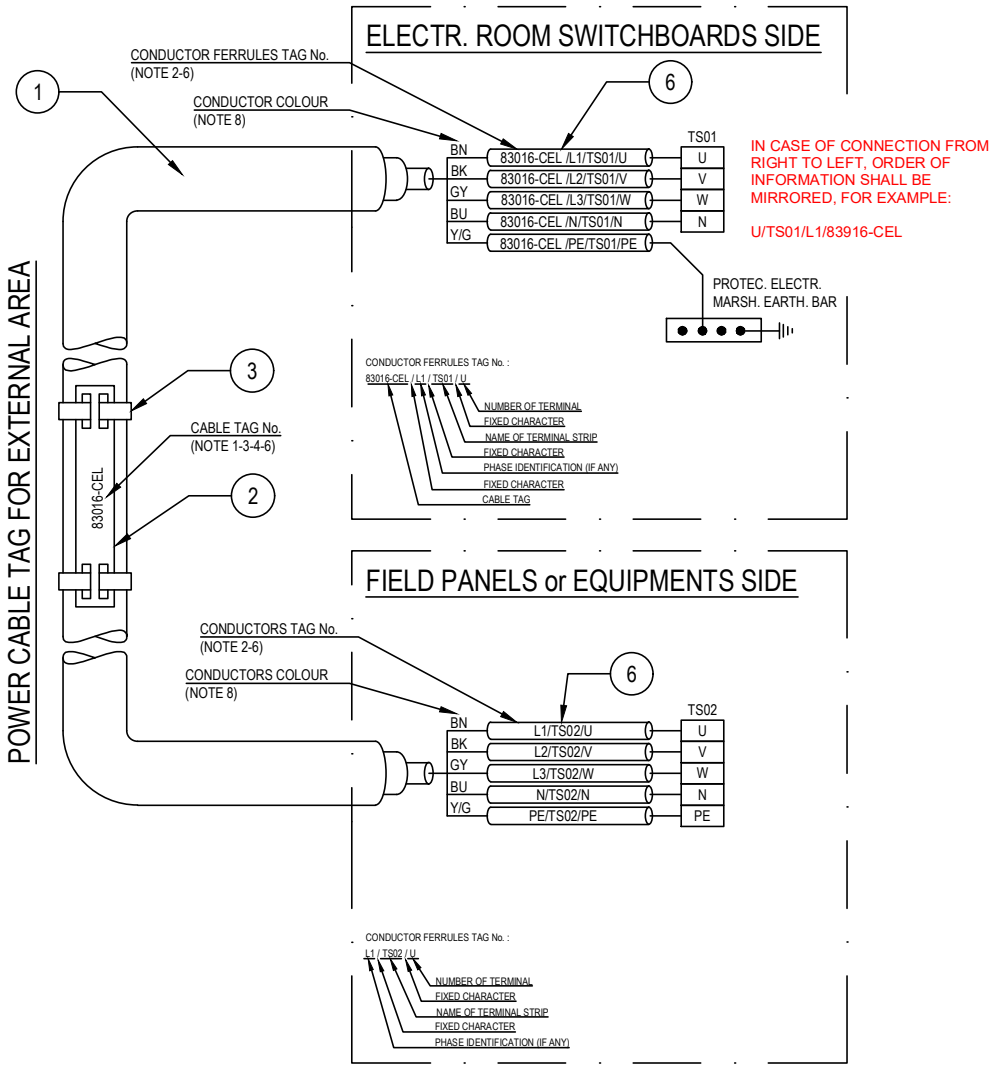
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

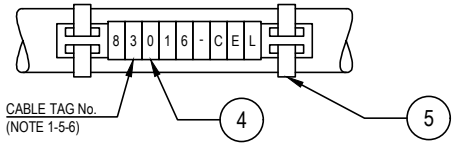
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

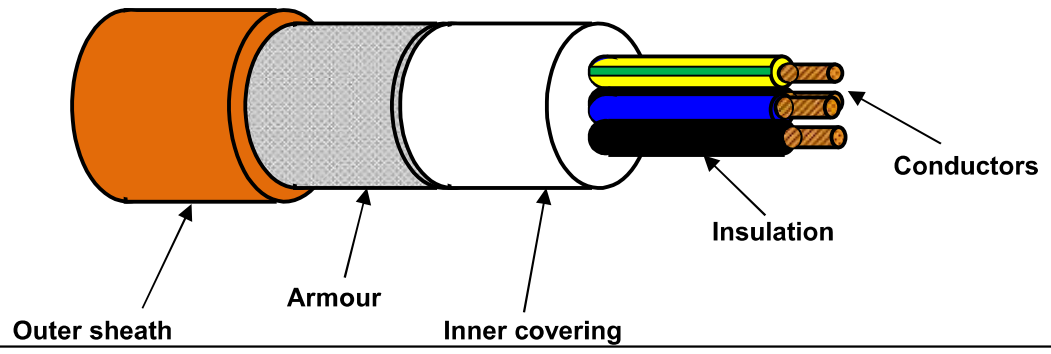
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-15	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						ELF-200N1-08-L1-23	Emergency Lighting Fixture	Upper Deck		ELF-200N1-08-L1-15	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Double				L-50-102-LVT-072

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-14	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000733		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-15 To EJB-200N1-08-L1-14

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-14	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000733		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

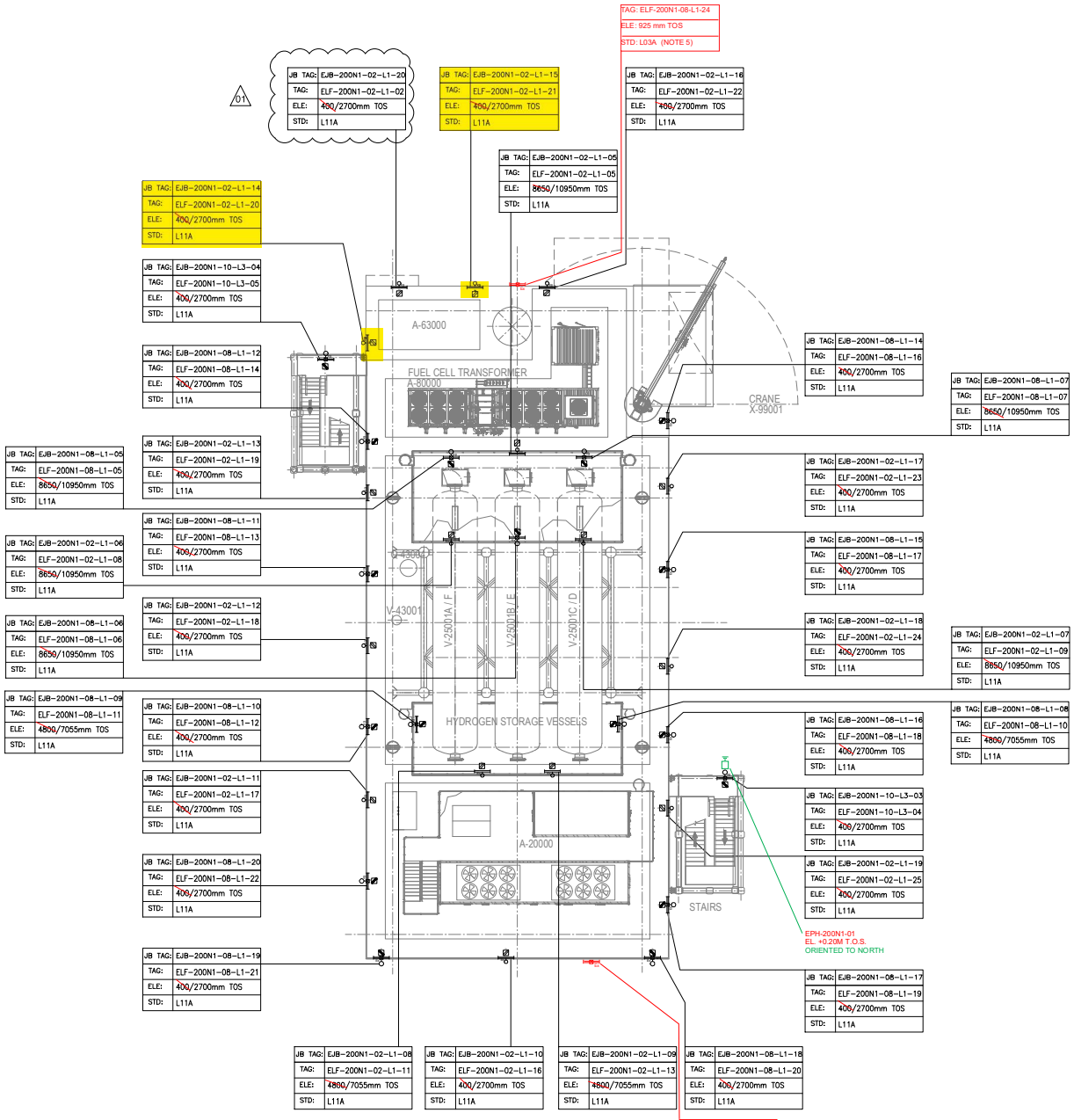
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Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

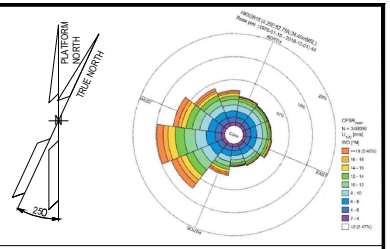
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:12:58.868Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:34:46.343Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

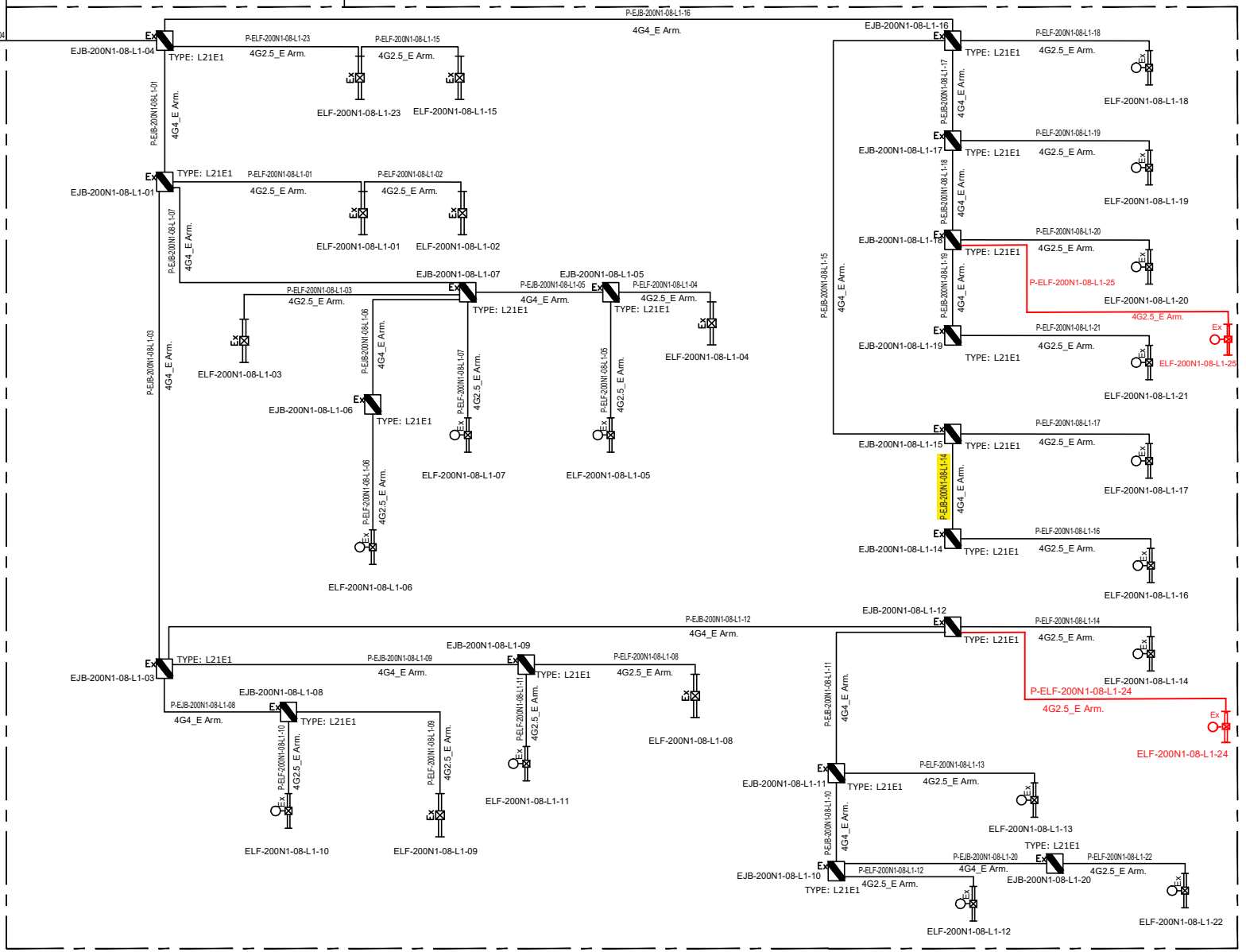
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

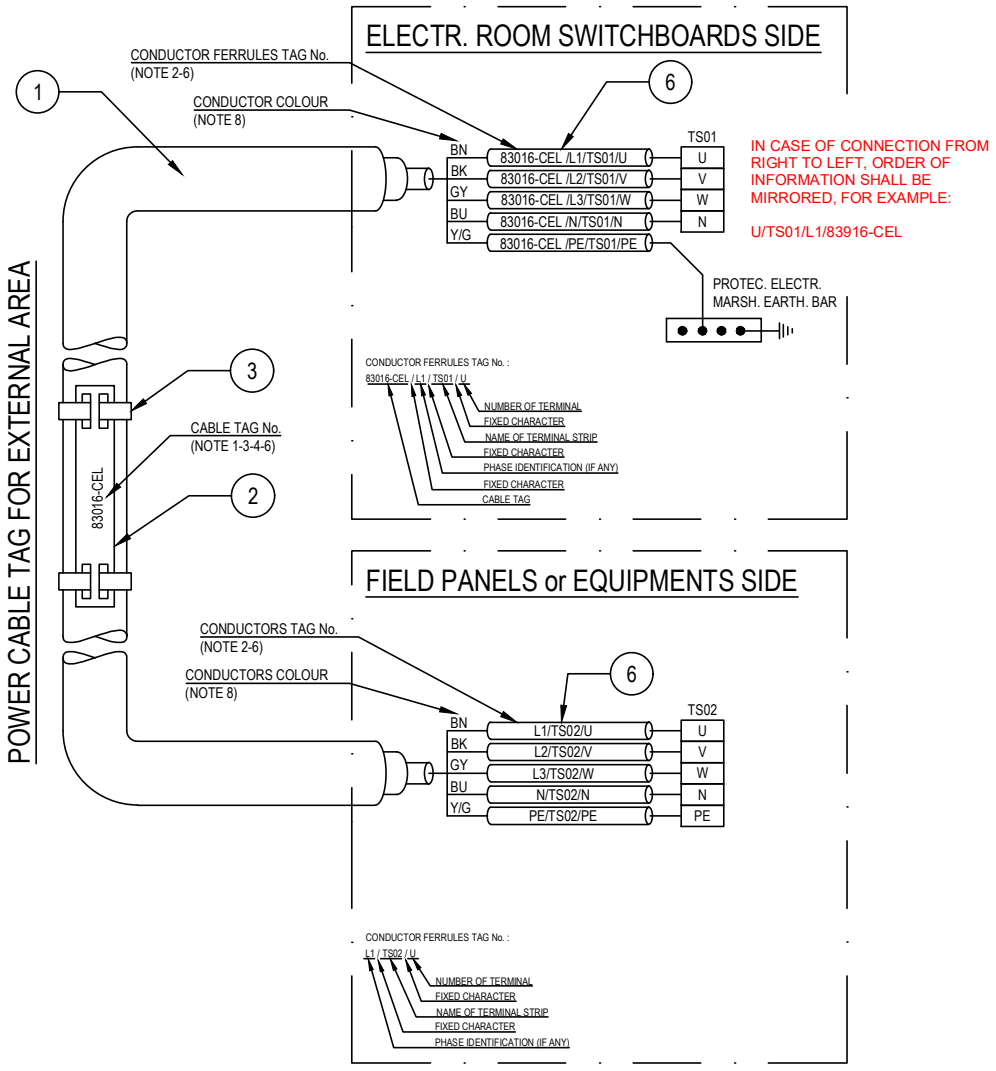
SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DG–20125	011	01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

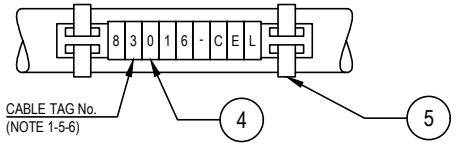
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

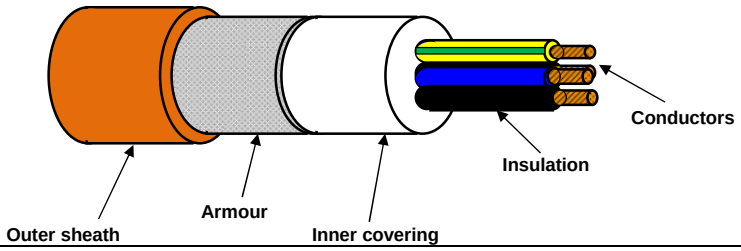
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-14	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-15	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-14	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-003

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-16	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000734		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-14 To ELF-200N1-08-L1-16

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-16	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000734		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

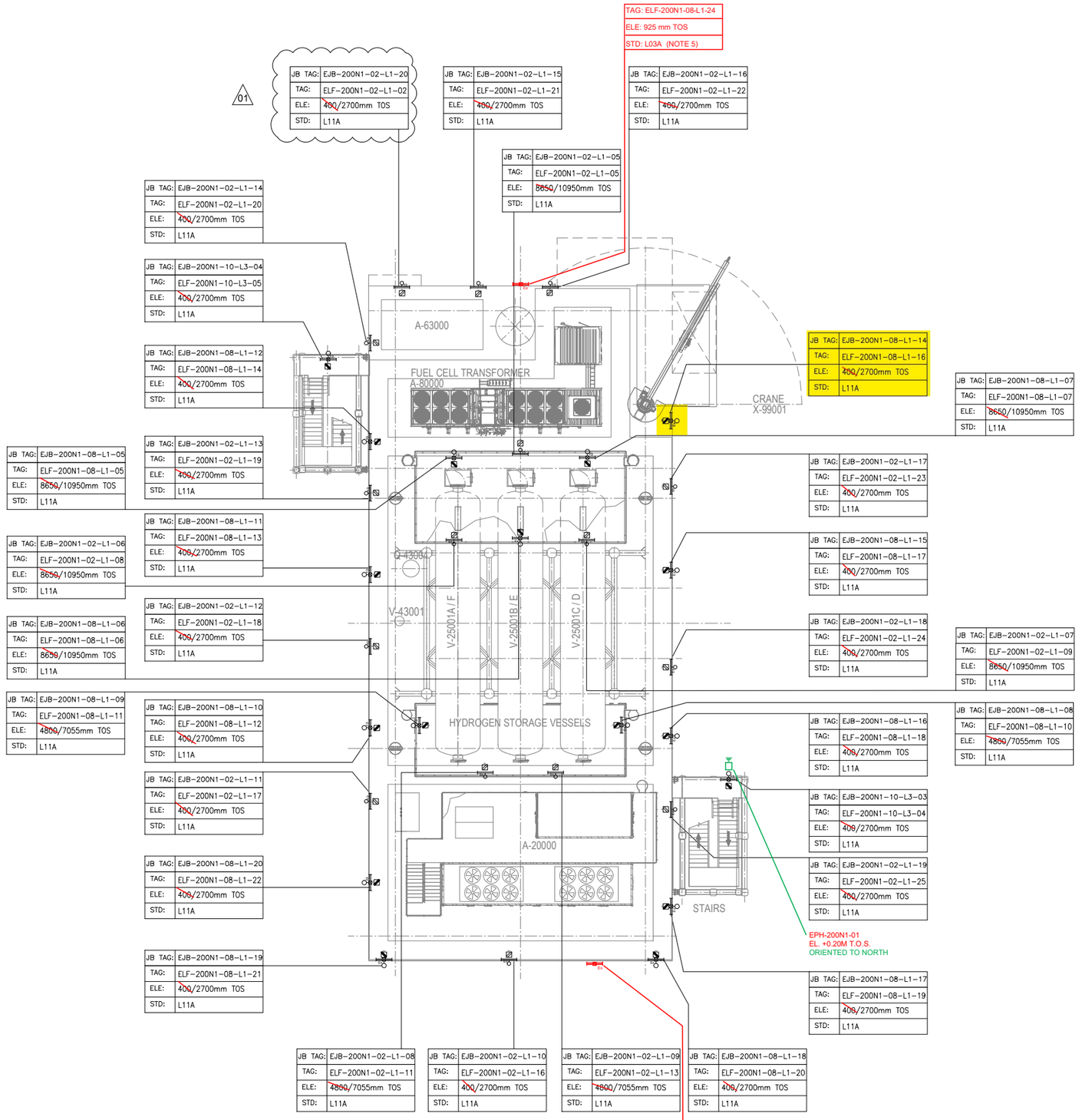
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

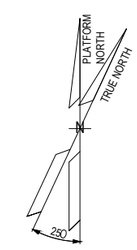
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Andrea Andreani	
Date	2024-11-22	2024-12-31	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:19:34.247Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T11:33:56.034Z	

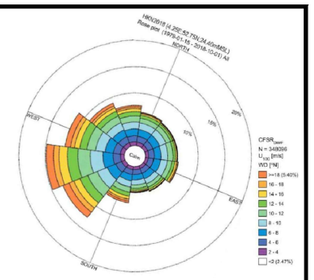
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

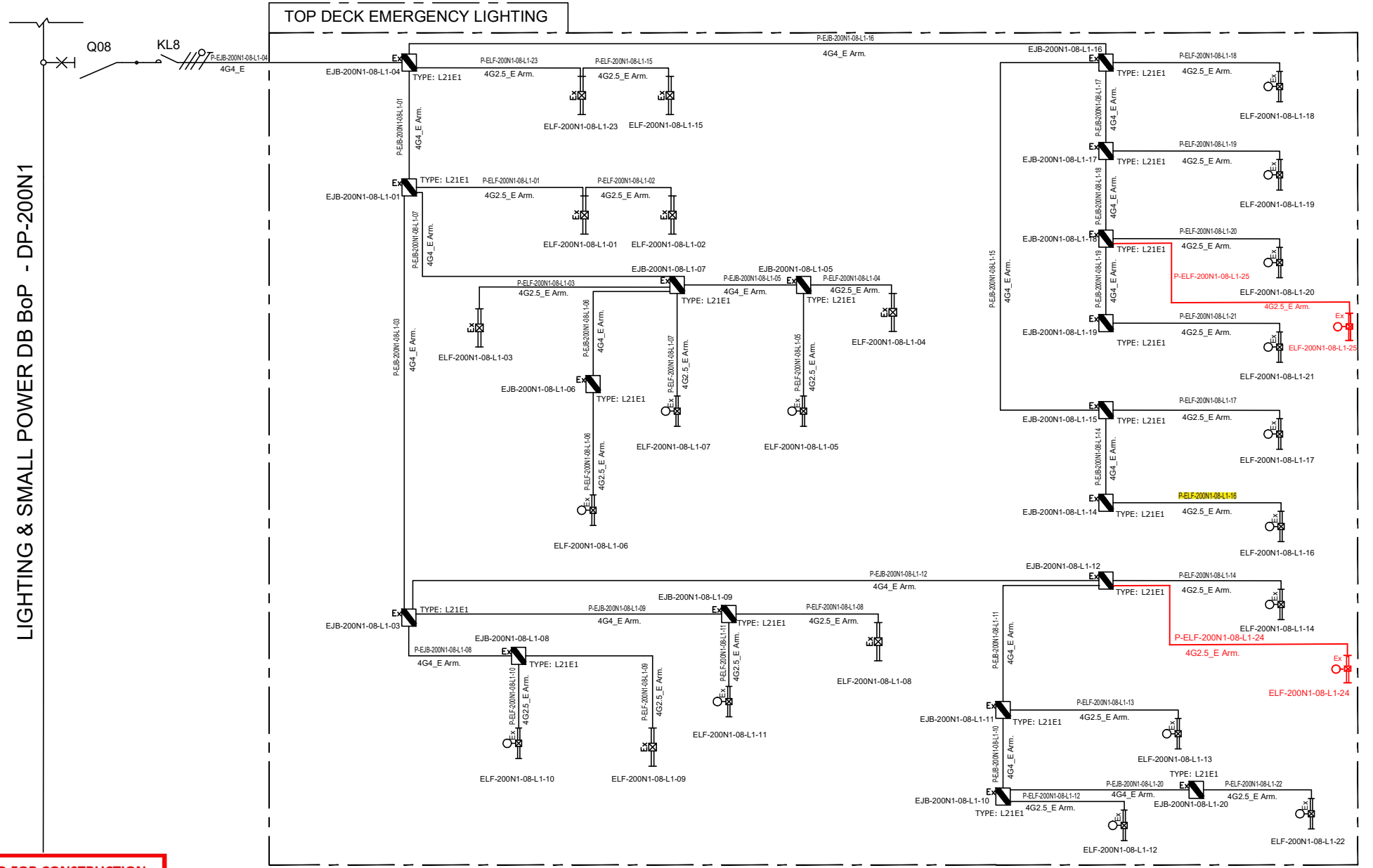
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

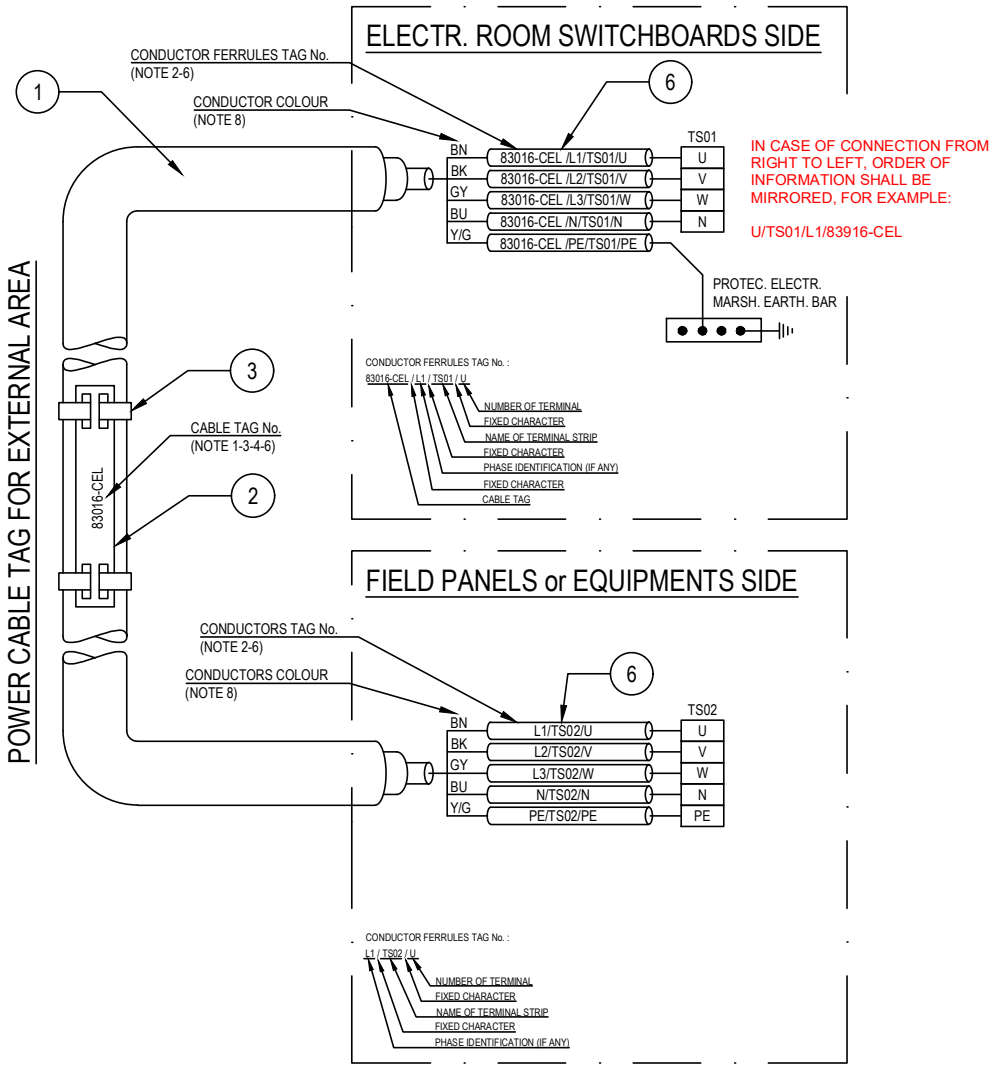
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

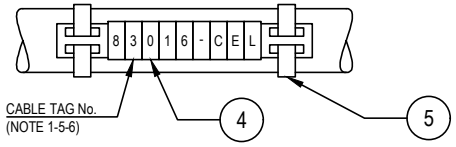
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

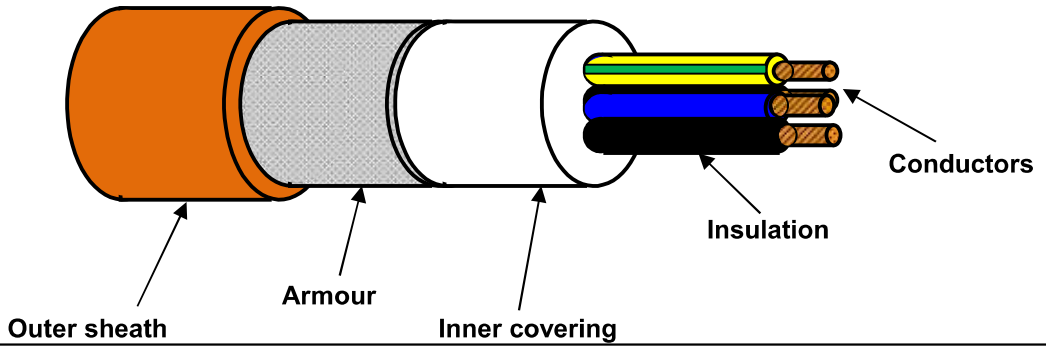
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-16	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-14	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-16	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-024

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-EJB-200N1-08-L1-15	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000735		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-16 To EJB-200N1-08-L1-15

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-15	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000735		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

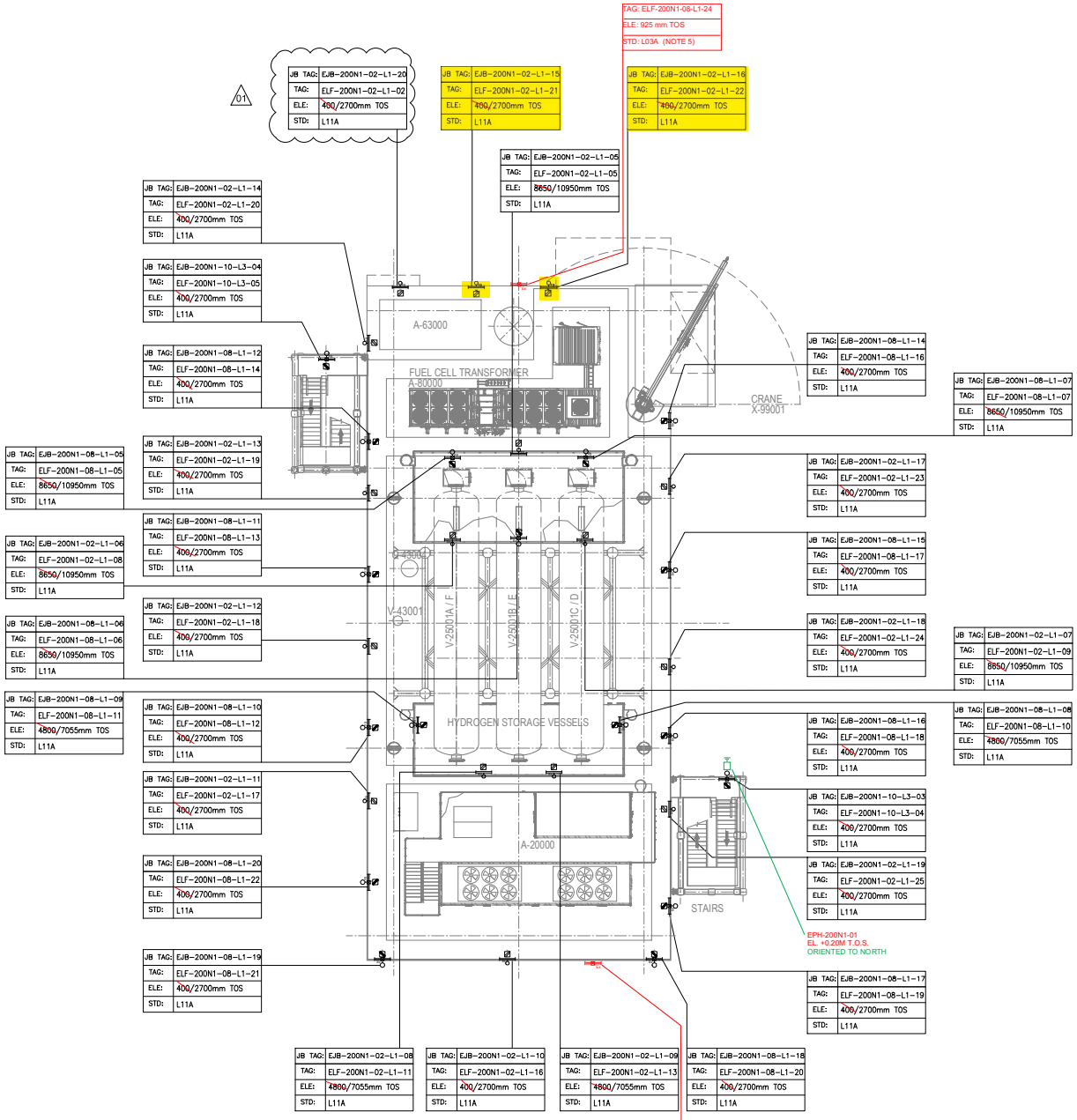
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

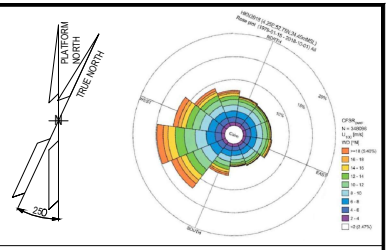
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:13:21.183Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:46:59.796Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

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- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

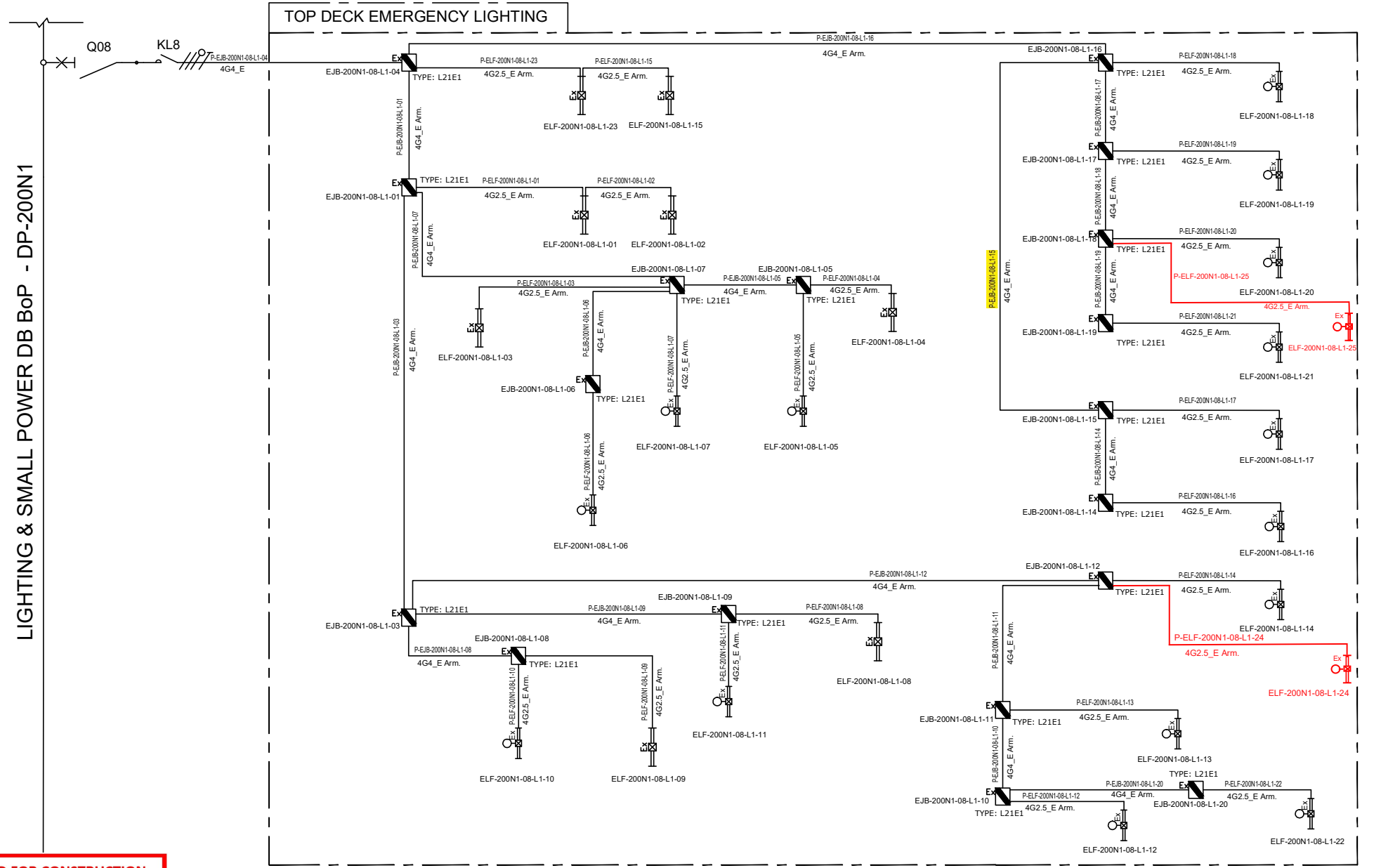
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

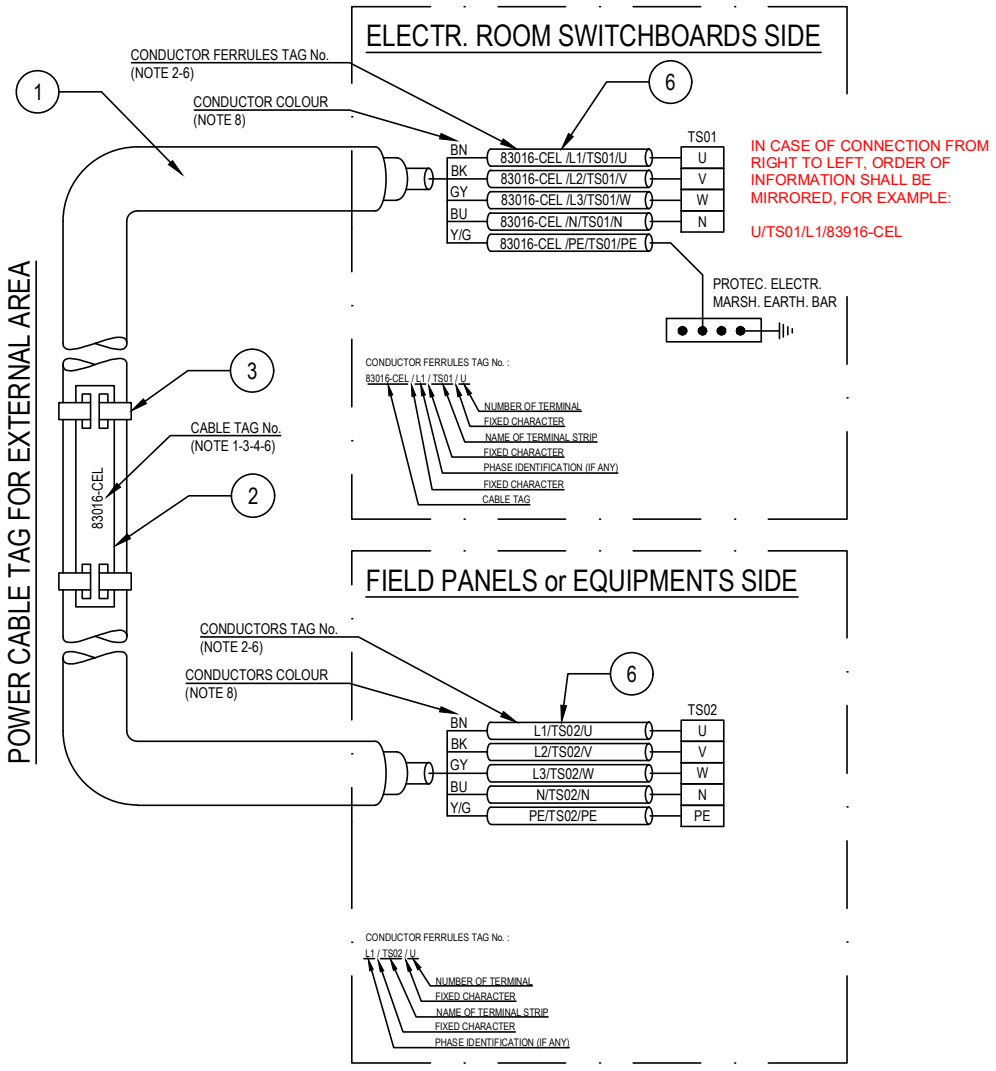
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
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6	CORE FERRULES	PVC			

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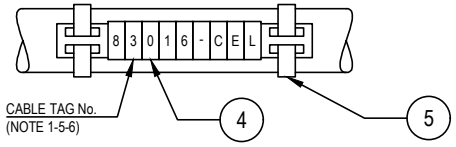
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- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

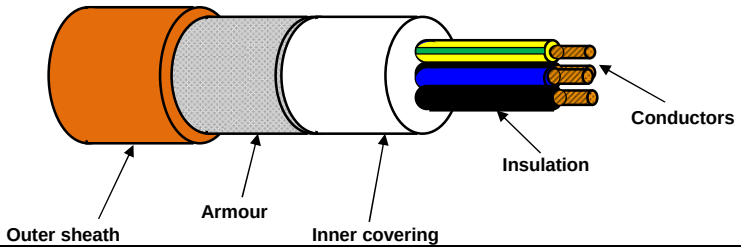
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-15	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-16	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-15	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-003

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-17	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000736		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-15 To ELF-200N1-08-L1-17

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-17	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000736		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

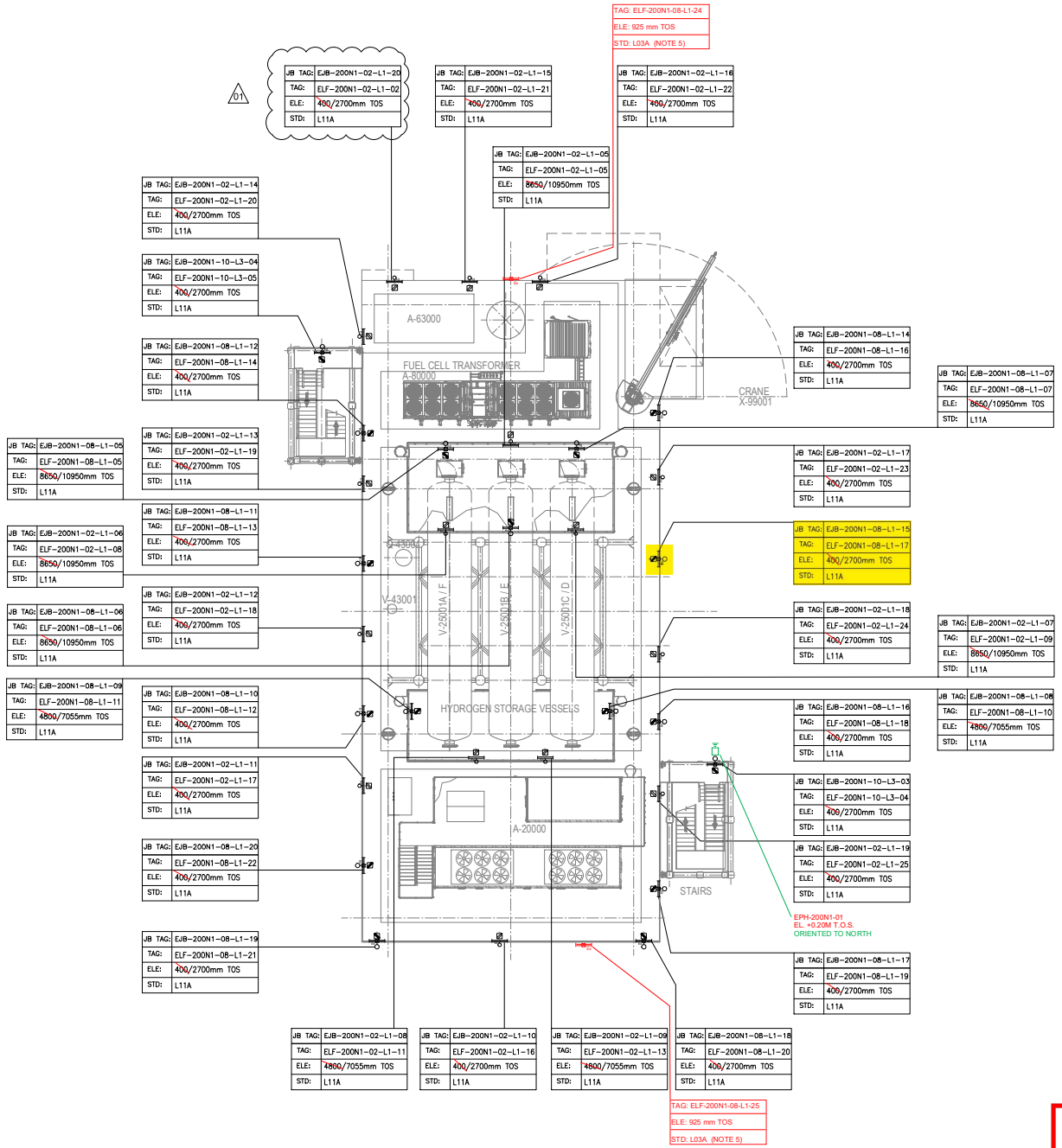
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

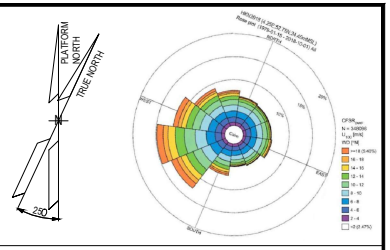
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-28	2025-01-18	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-28T07:30:31.617Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-18T10:24:37.088Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

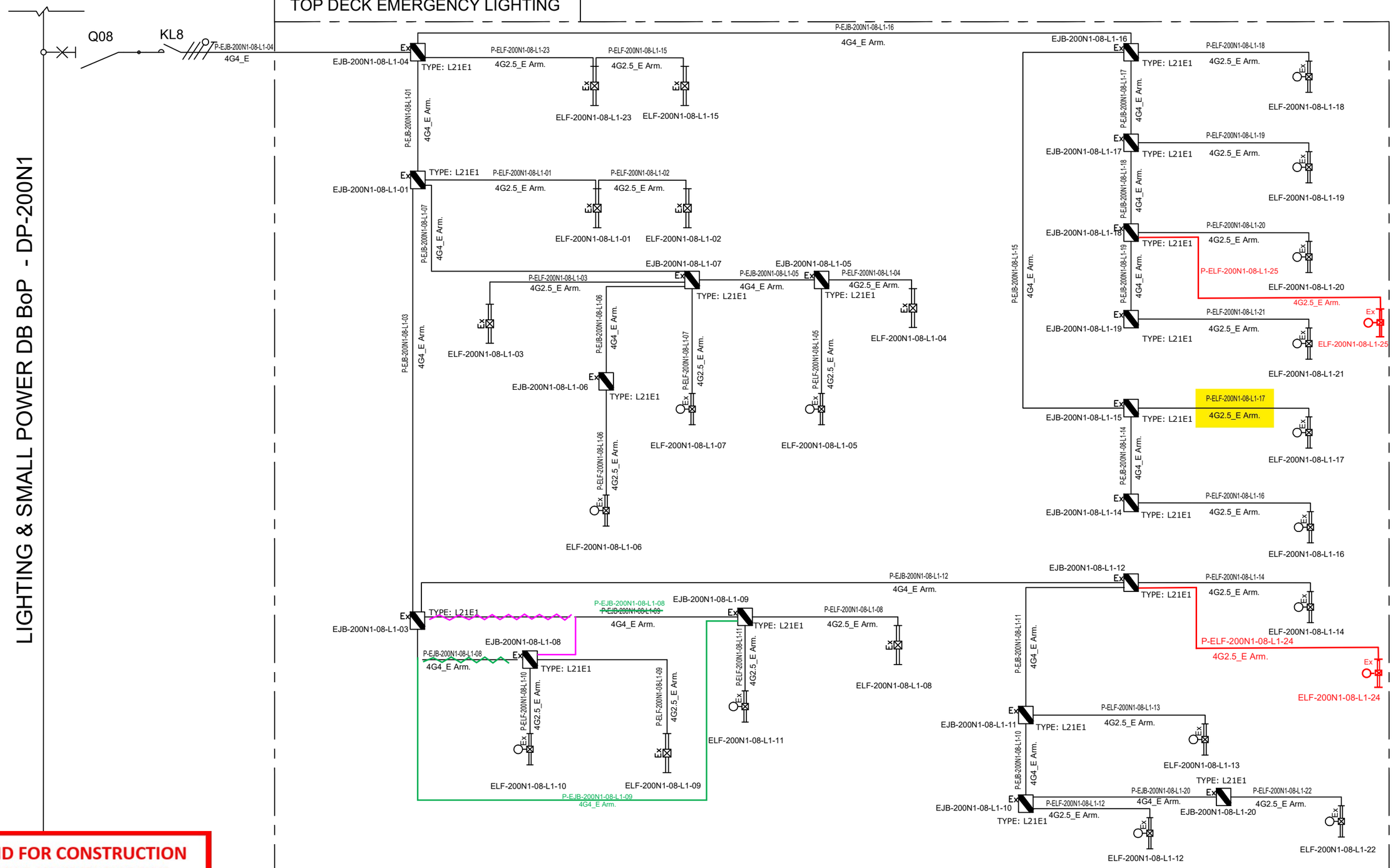
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

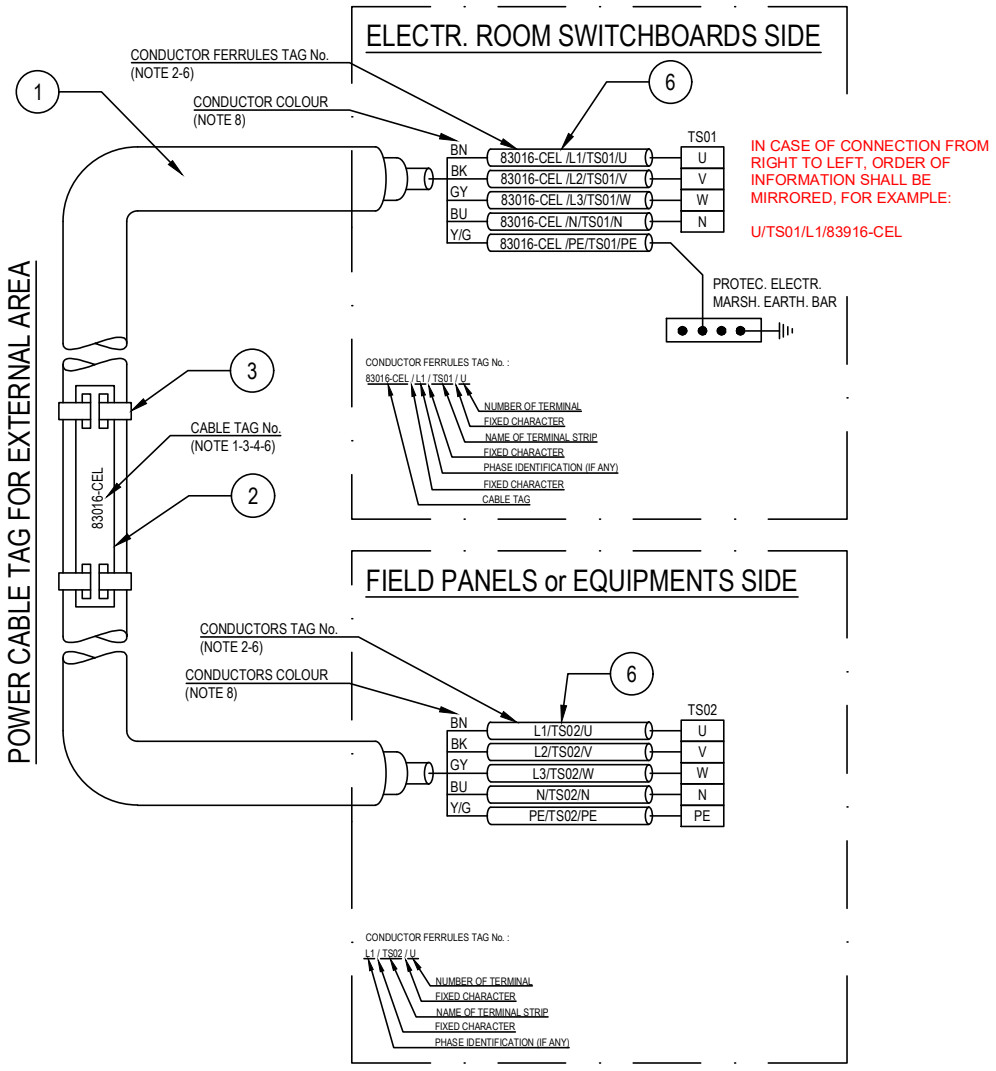
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

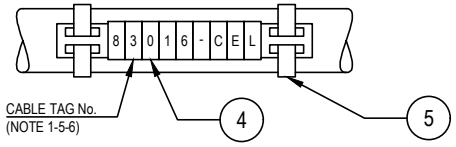
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

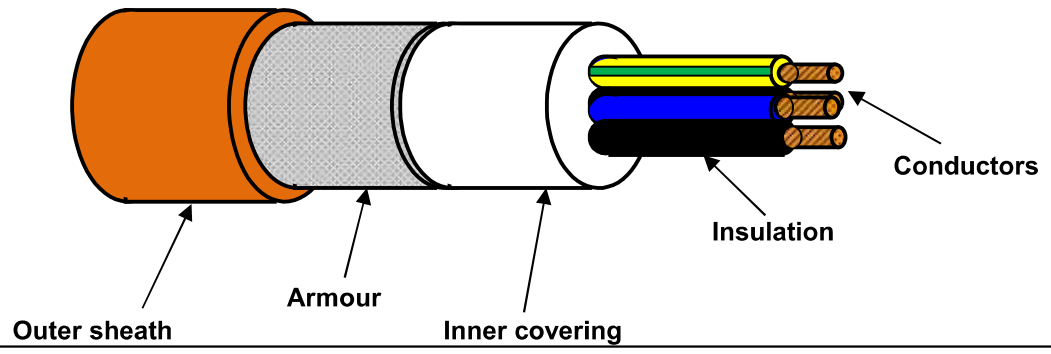
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-17	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-15	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-17	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-022

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-16	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000737		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-04 To EJB-200N1-08-L1-16

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ITEM	Tag	P-EJB-200N1-08-L1-16	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000737		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,5	
6		PH 2	0,5	
7		PH 3	0,5	
8	ARMOUR CONTINUITY Ω		0,5	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,5	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

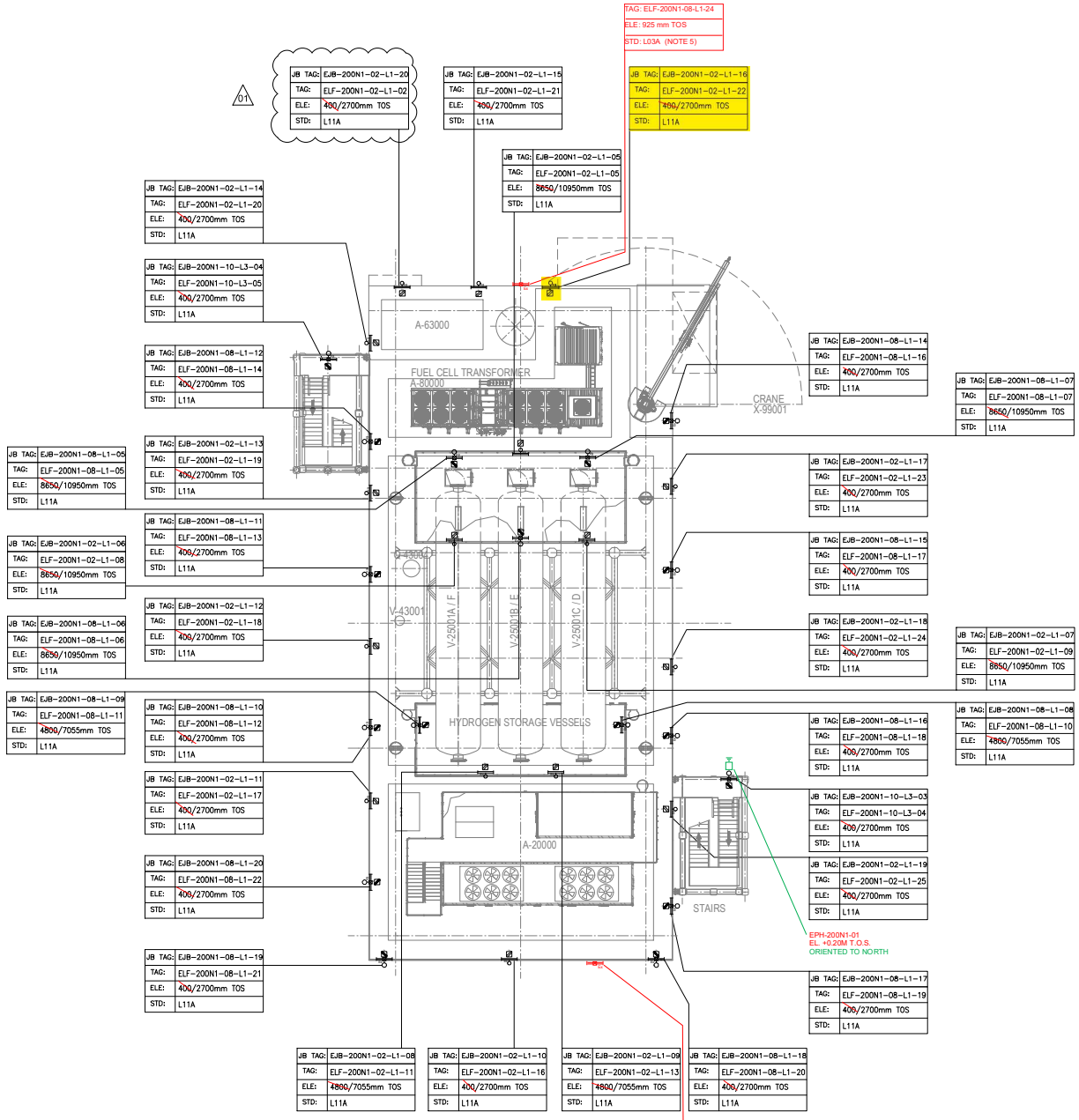
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Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

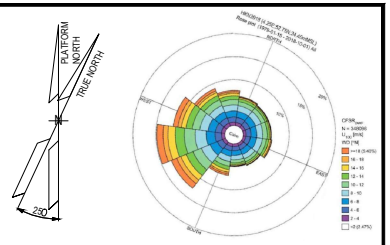
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-17	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:13:37.526Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-17T18:28:58.782Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
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4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

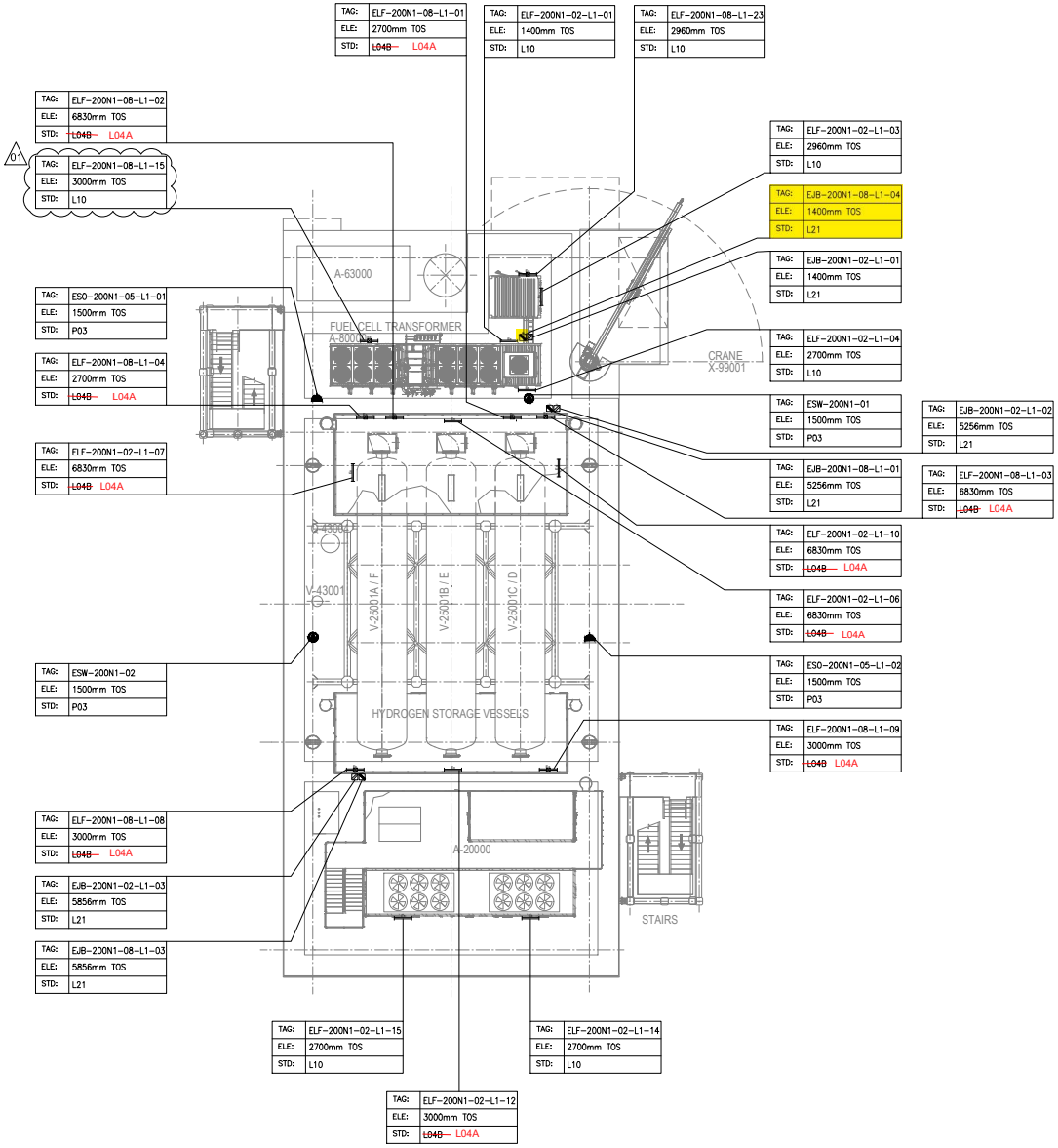
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

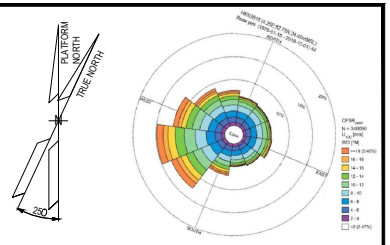
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DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



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00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

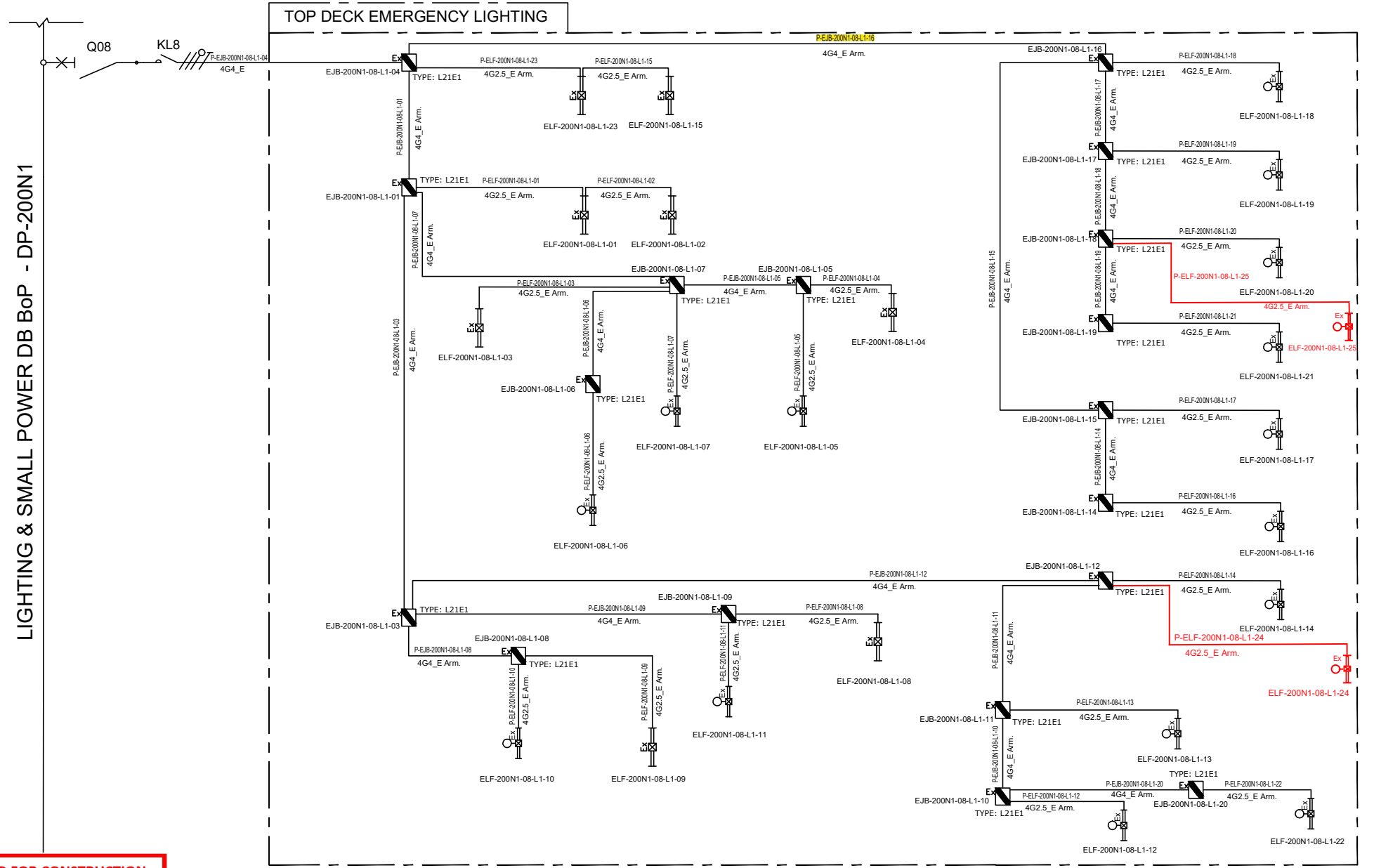
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

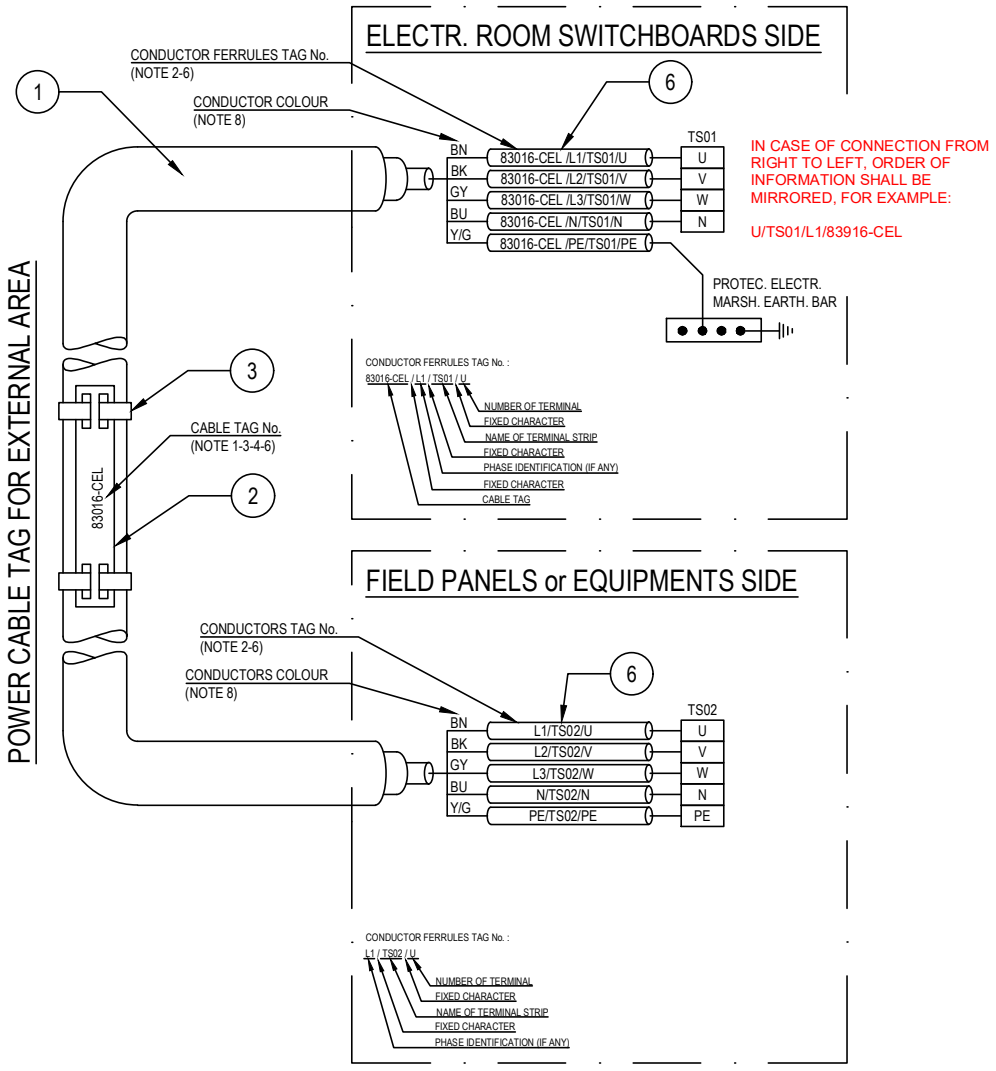
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

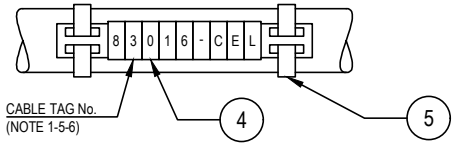
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

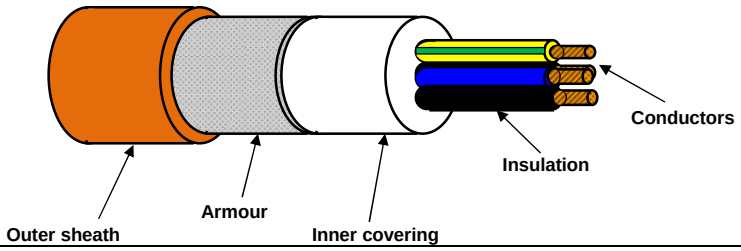
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-16	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-04	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-16	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CL2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-300-102-LVT-002 / L-300-101-LVT-073 / L-750-101-LVT-015 / L-750-101-LVT-013 / L-750-101-LVT-014 / L-300-101-LVT-079 / L-150-102-LVT-003

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-18	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000738		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-16 To ELF-200N1-08-L1-18

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

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TASK	code	C10000738		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,1	
6		PH 2	0,1	
7		PH 3	0,1	
8	ARMOUR CONTINUITY Ω		0,1	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,1	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

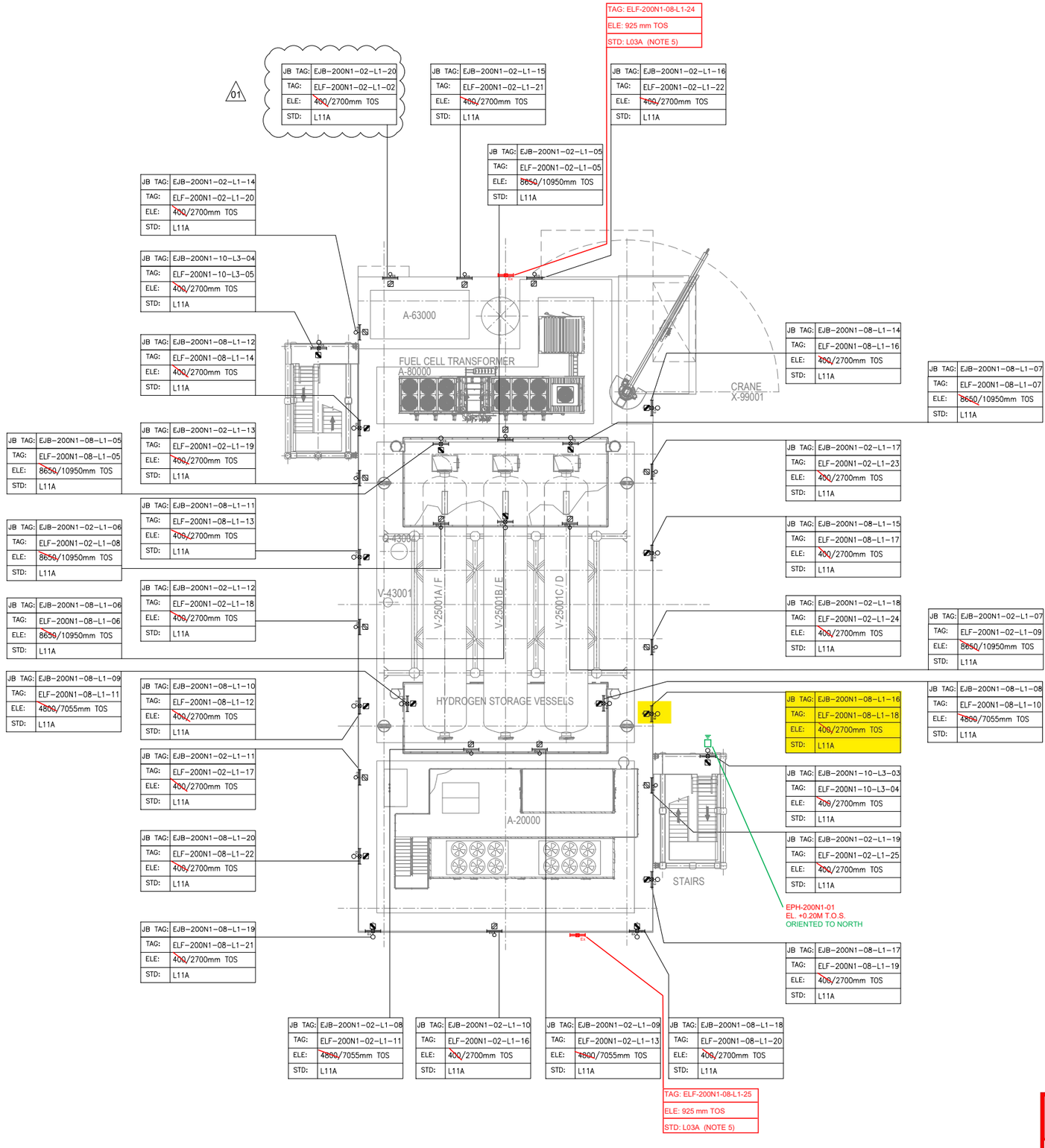
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

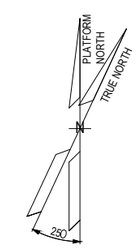
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Andrea Andreani	
Date	2024-11-22	2024-12-31	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:19:44.475Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T09:54:51.949Z	

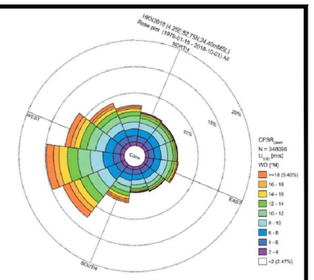
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





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01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
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REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

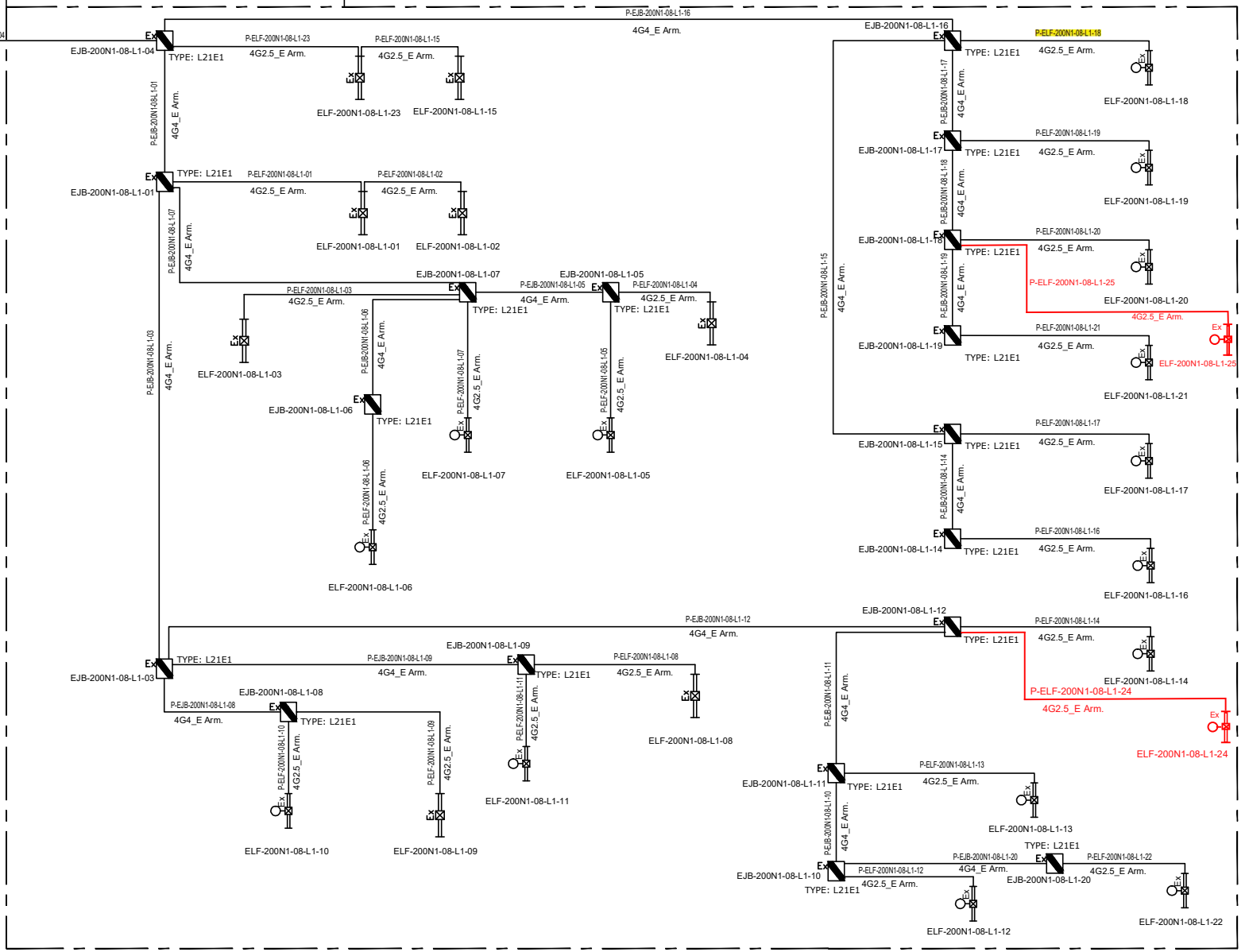
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

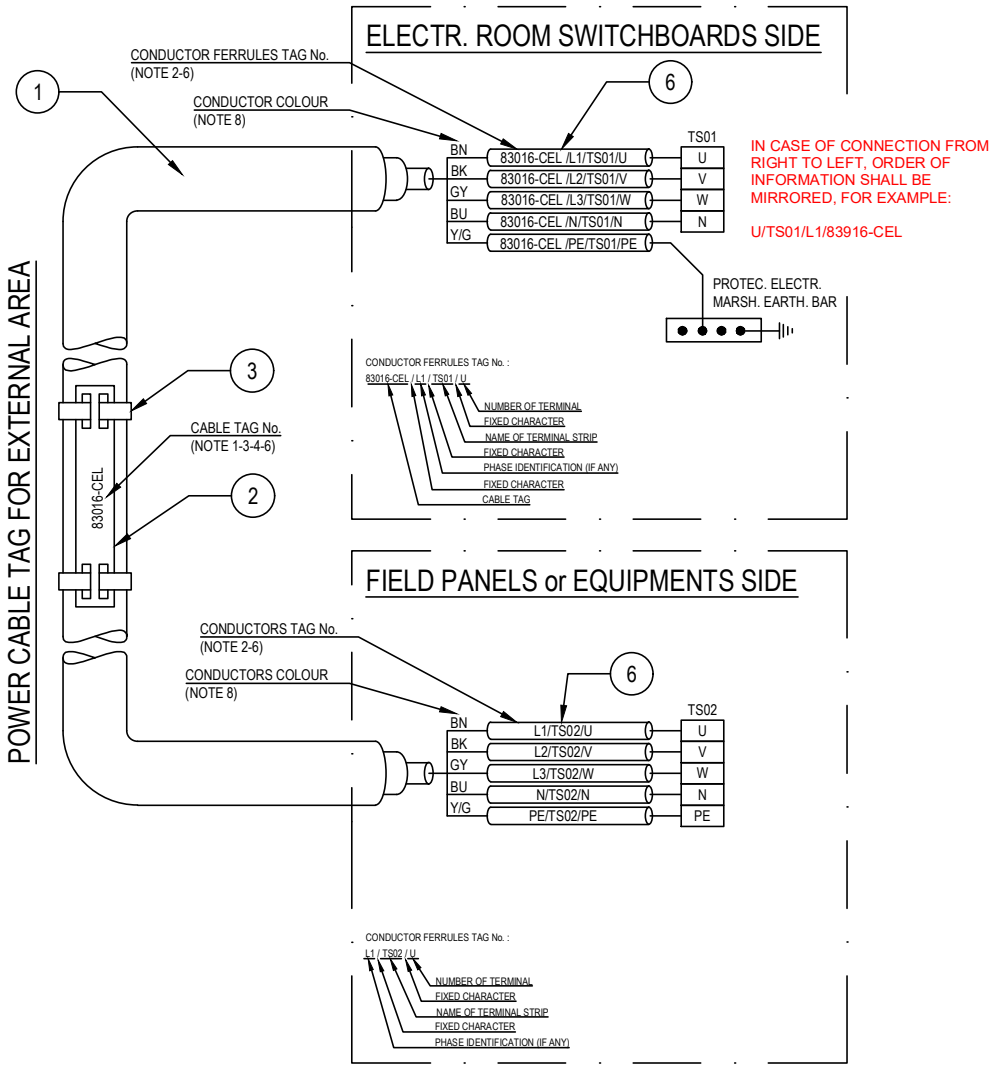
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

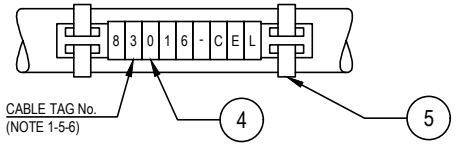
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

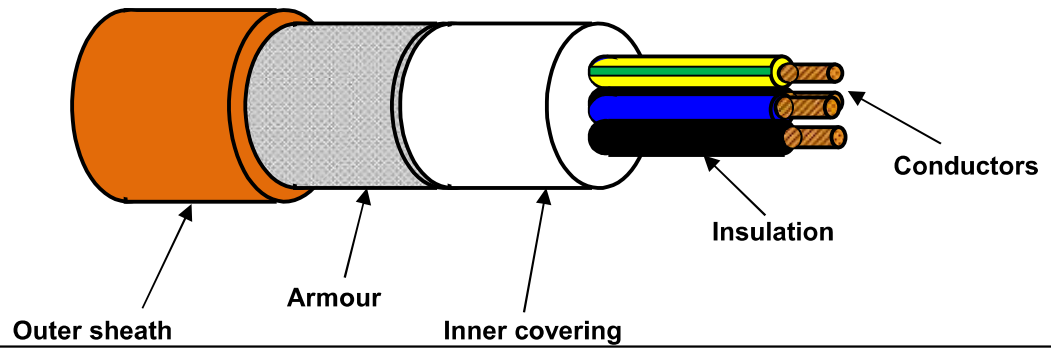
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-18	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-16	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-18	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-020

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-EJB-200N1-08-L1-17	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000739		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-16 To EJB-200N1-08-L1-17

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-17	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000739		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,5	
6		PH 2	0,5	
7		PH 3	0,5	
8	ARMOUR CONTINUITY Ω		0,5	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,5	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

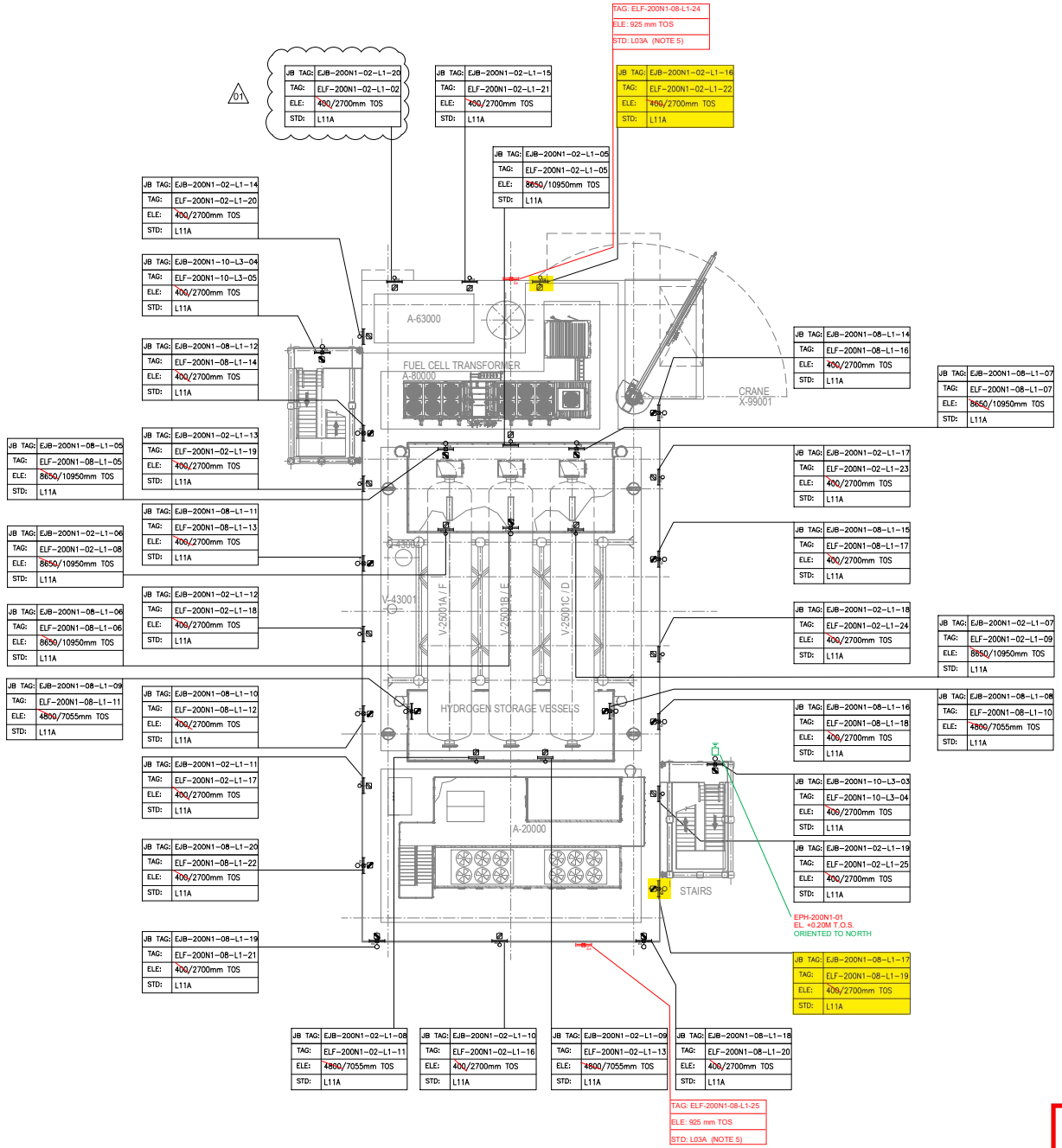
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

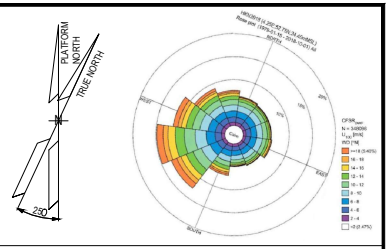
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-13	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:00:03.593Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:44:54.884Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

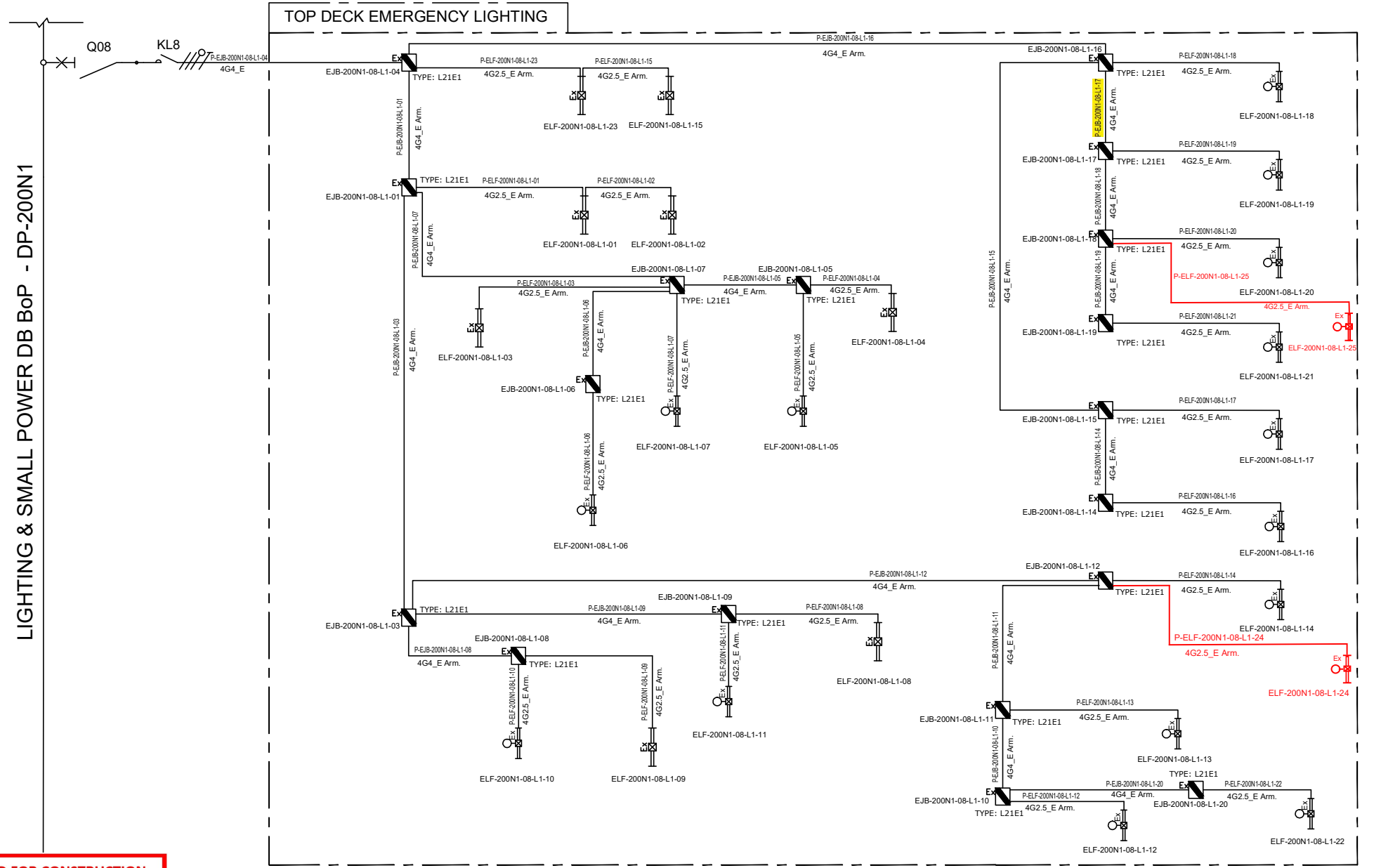
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

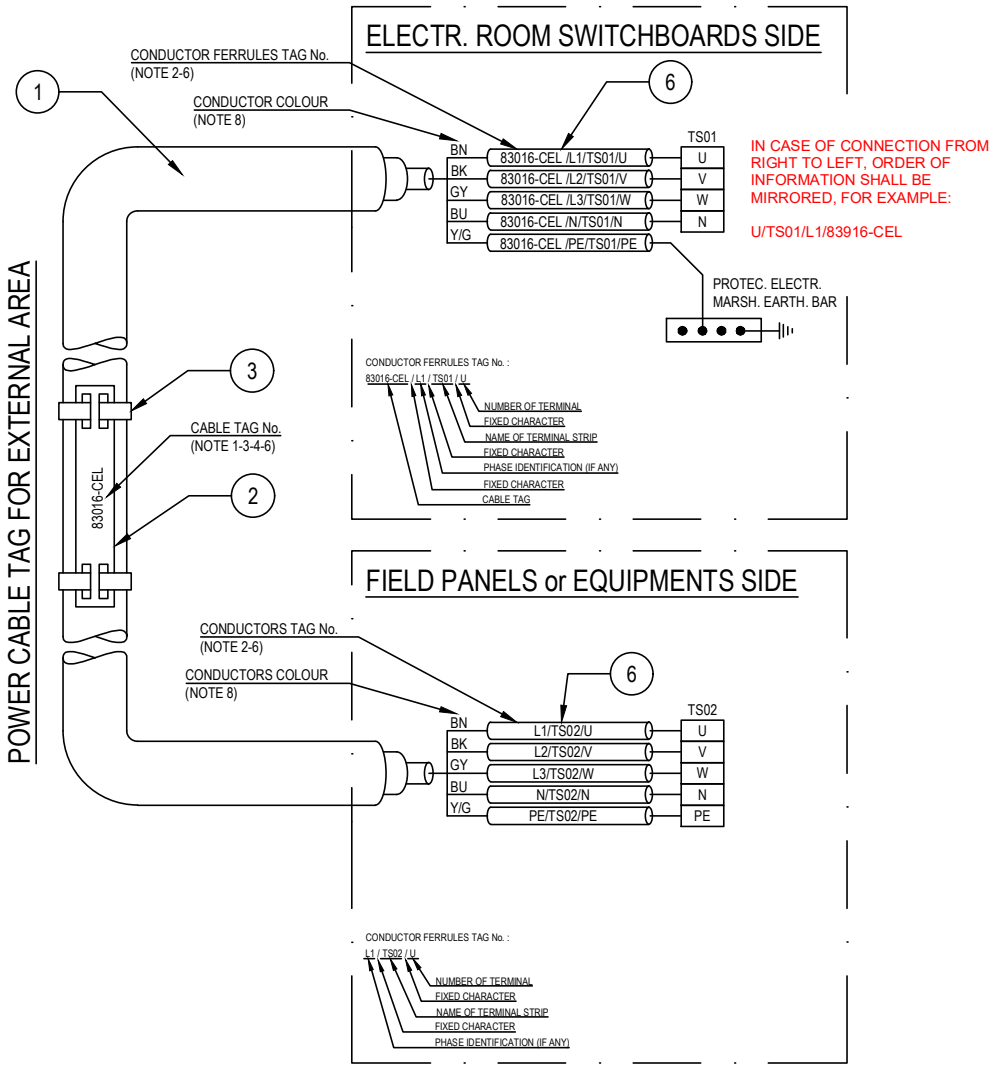
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
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5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

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1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
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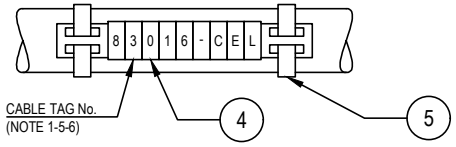
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- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

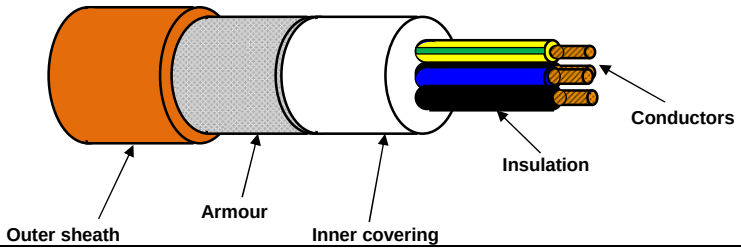
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-17	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-16	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-17	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-003 / L-150-102-LVT-004

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-19	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000740		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type	Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH	Cores/Size mm²	4G2,5_E mm2	Color	ORANGE

From EJB-200N1-08-L1-17 To ELF-200N1-08-L1-19

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-19	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000740		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

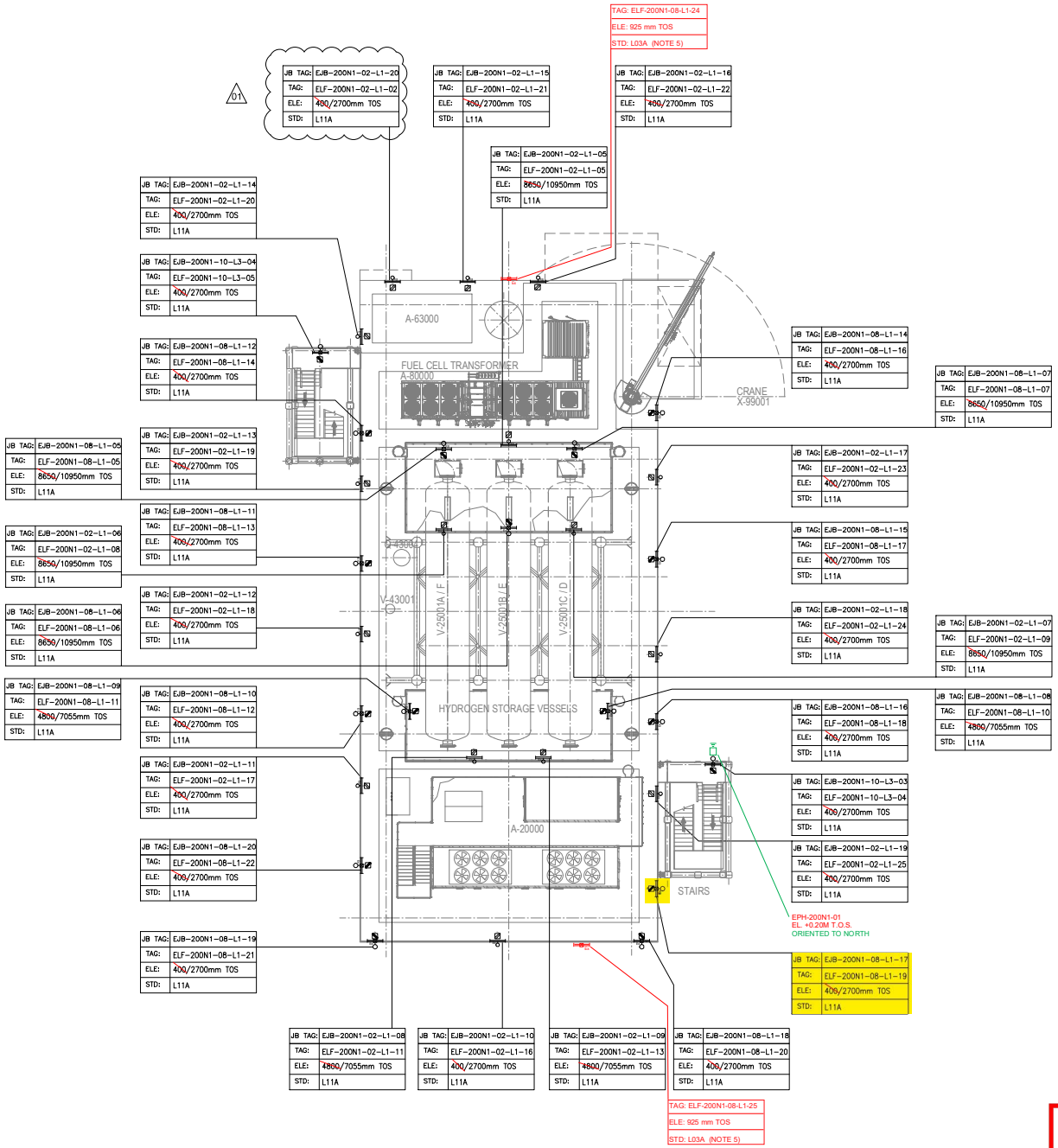
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

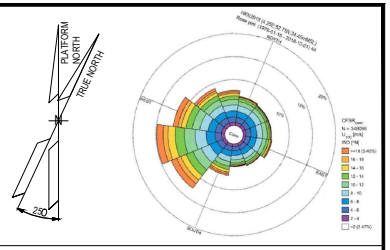
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Andrea Andreani	
Date	2024-11-22	2025-01-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:19:57.737Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-02T15:53:09.406Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

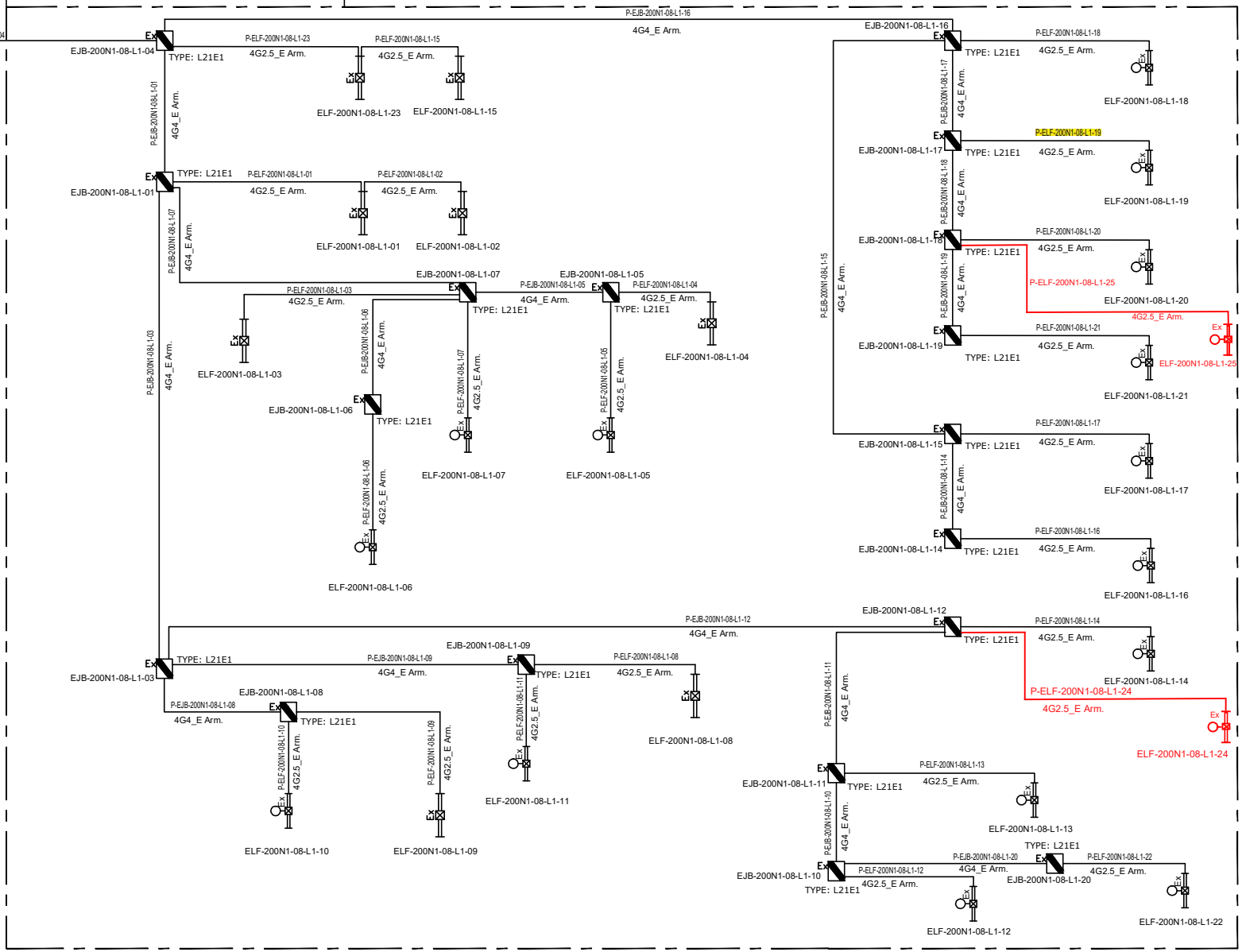
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DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

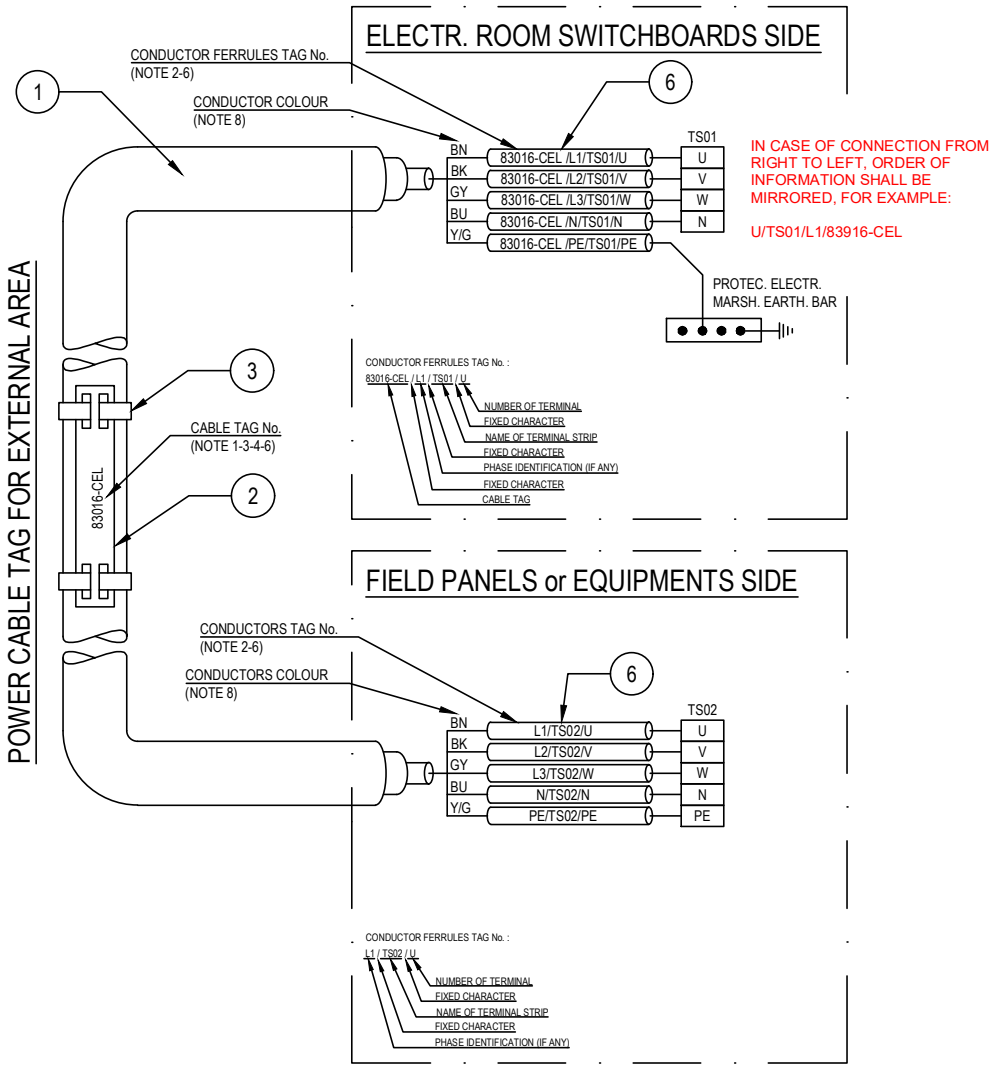
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

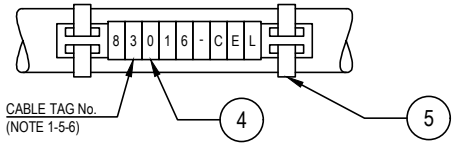
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

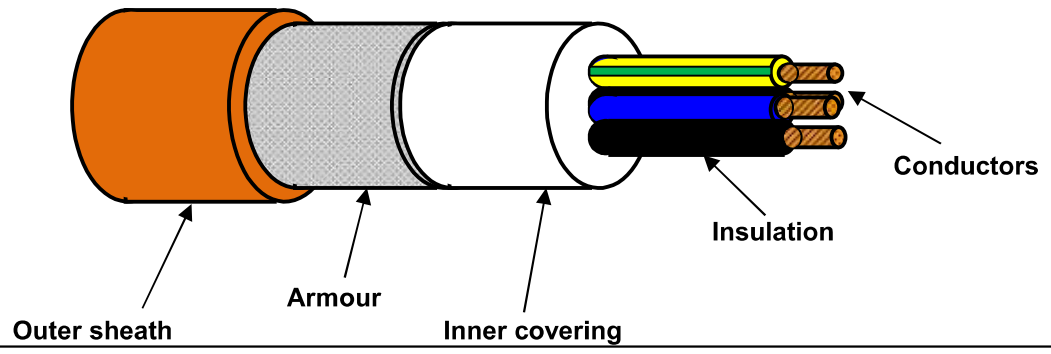
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-19	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-17	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-19	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-018

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-18	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000741		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-17 To EJB-200N1-08-L1-18

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-18	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000741		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,6	
6		PH 2	0,6	
7		PH 3	0,6	
8	ARMOUR CONTINUITY Ω		0,6	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,6	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

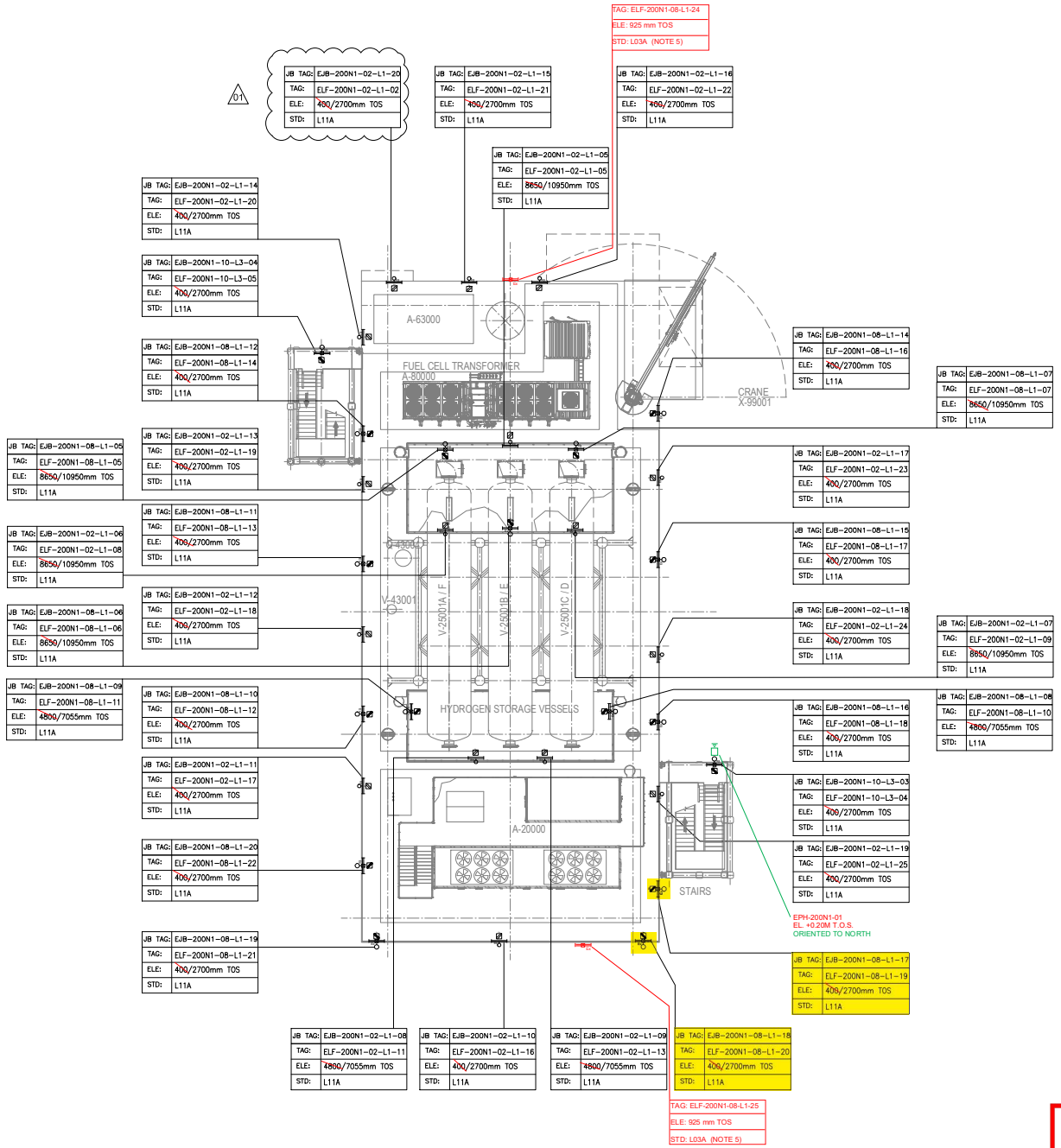
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:17:20.107Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:43:57.822Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01

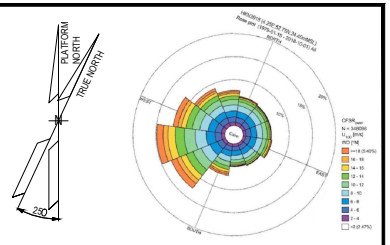


PLAN ON UPPER DECK
EL+30.310 T.O.S.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

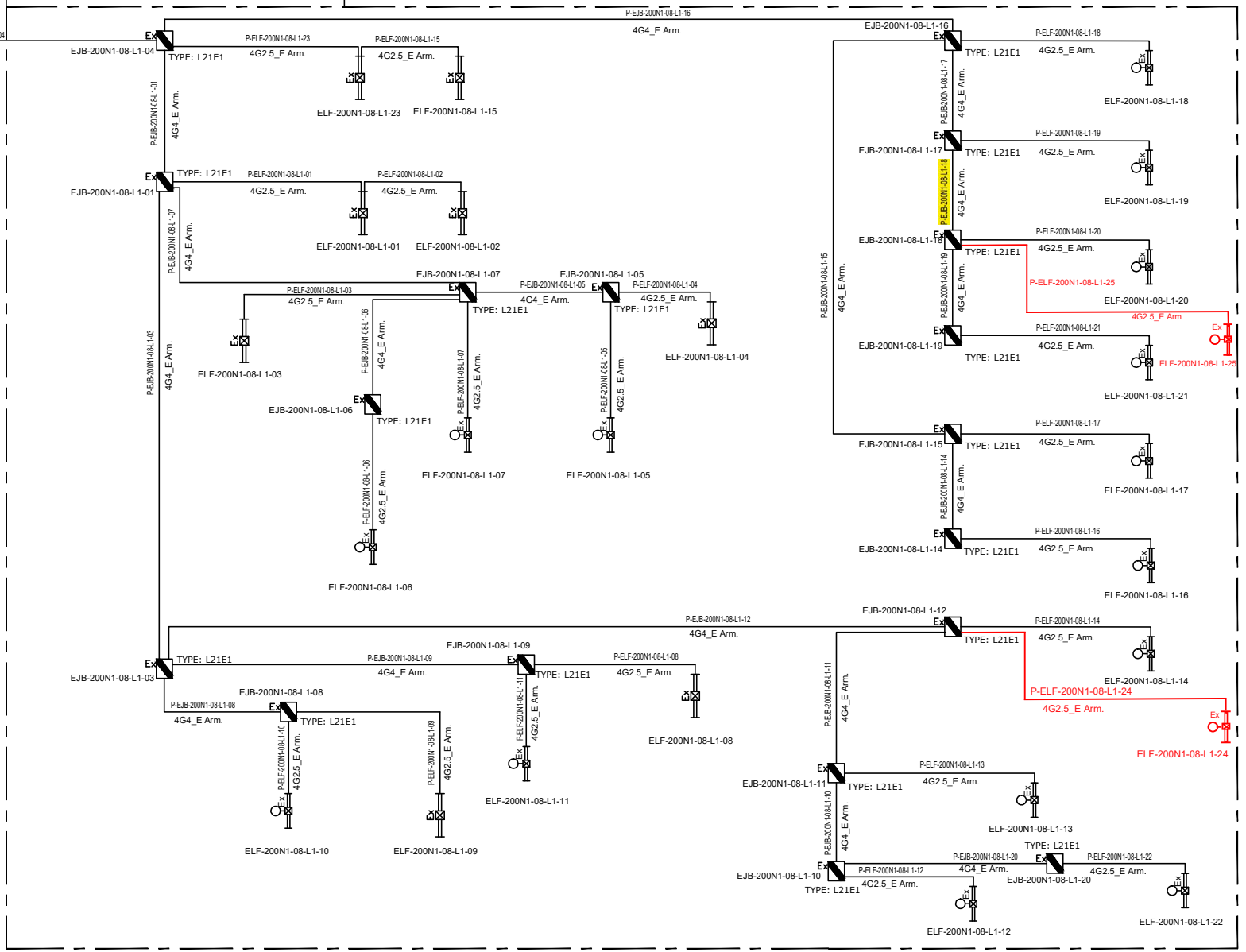
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DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

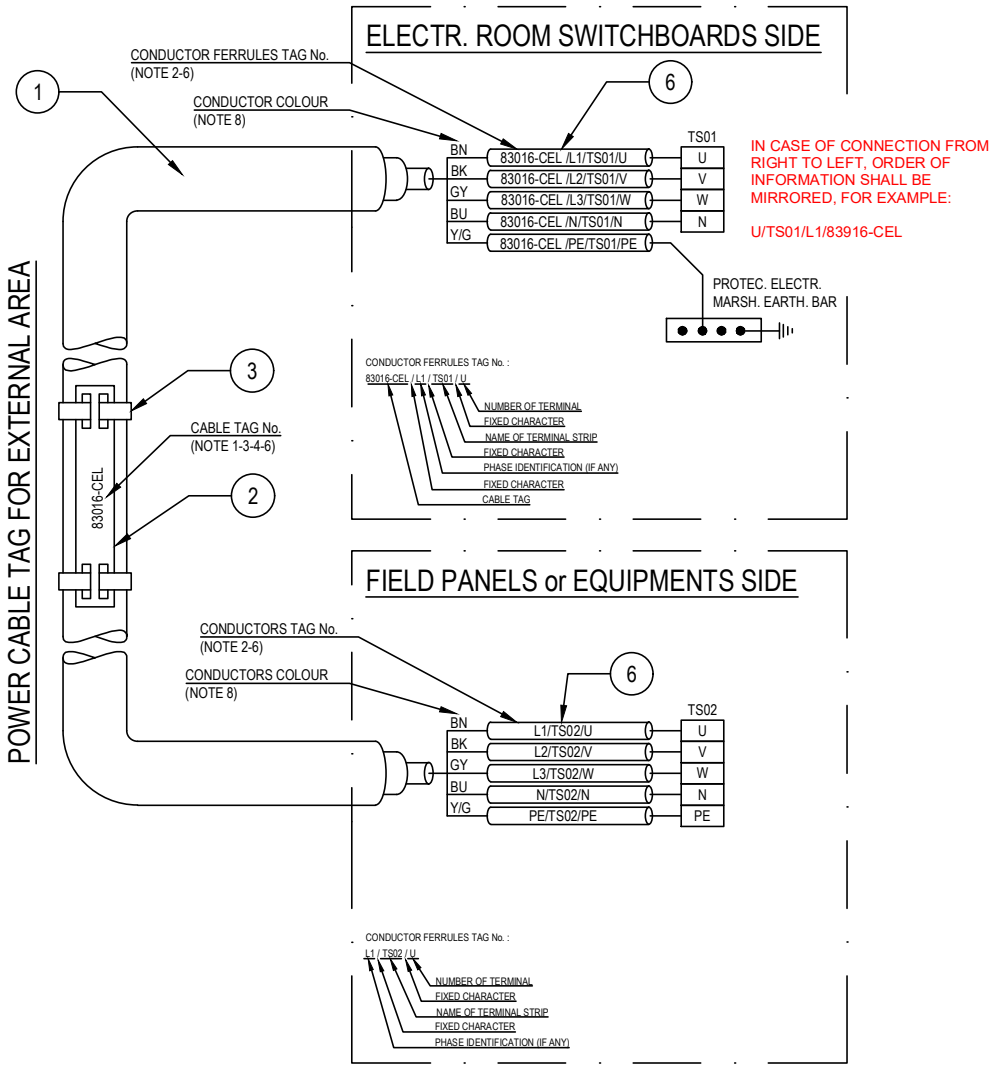
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

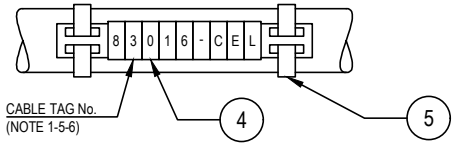
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

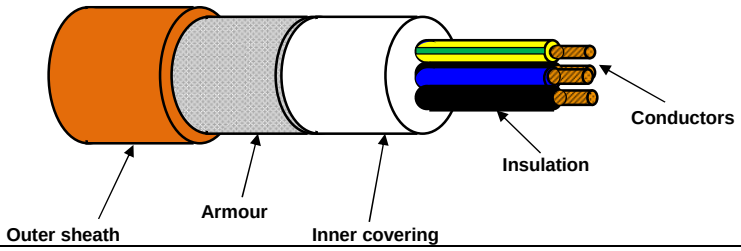
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-18	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-17	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-18	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-004

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-ELF-200N1-08-L1-20	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000742		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type	Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH	Cores/Size mm²	4G2,5_E mm2	Color	ORANGE

From EJB-200N1-08-L1-18 To ELF-200N1-08-L1-20

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-20	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000742		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

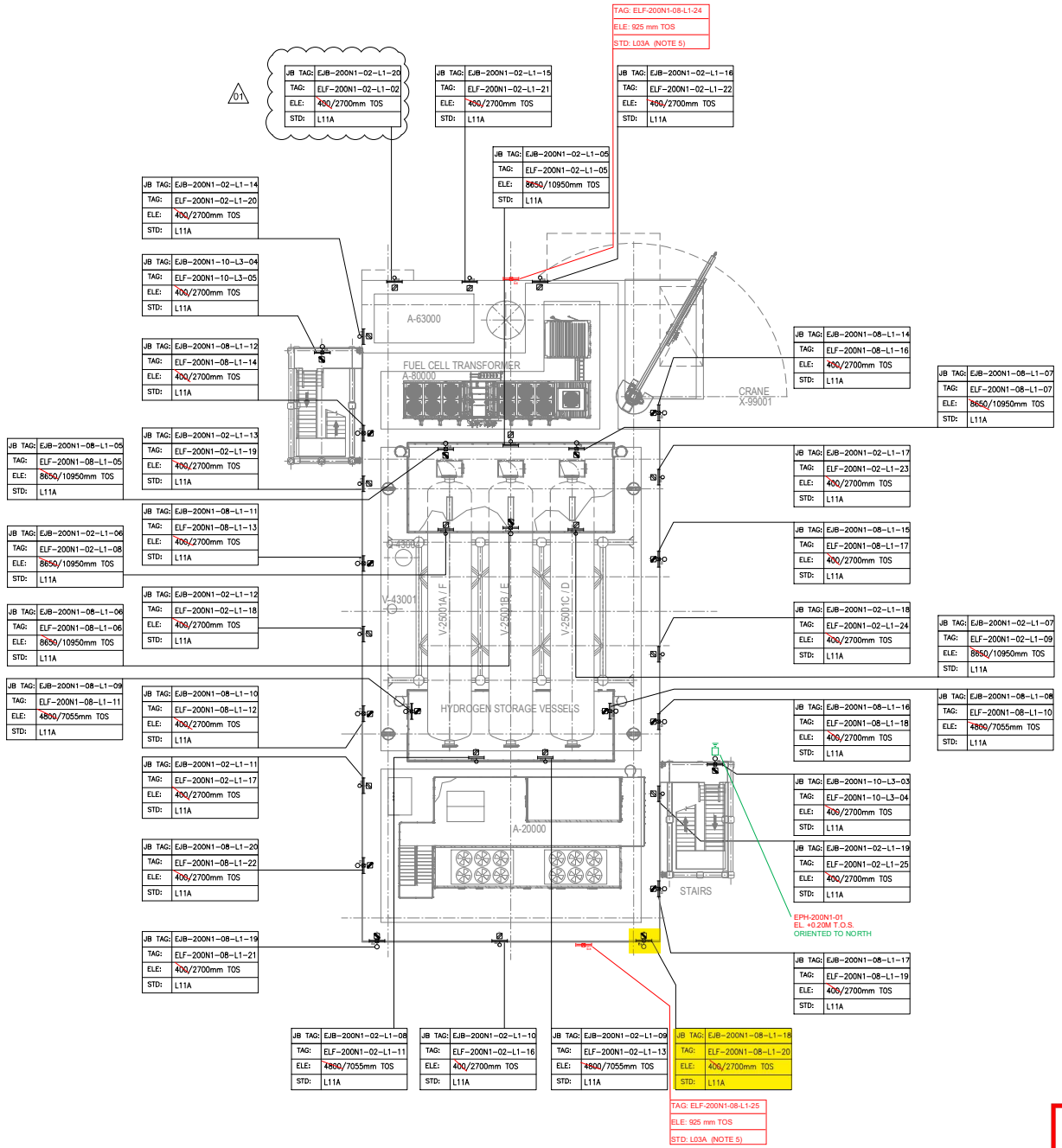
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

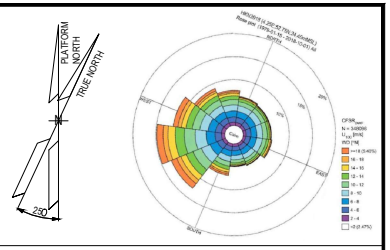
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Andrea Andreani	
Date	2024-11-22	2024-12-31	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:20:26.696Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T09:48:29.926Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

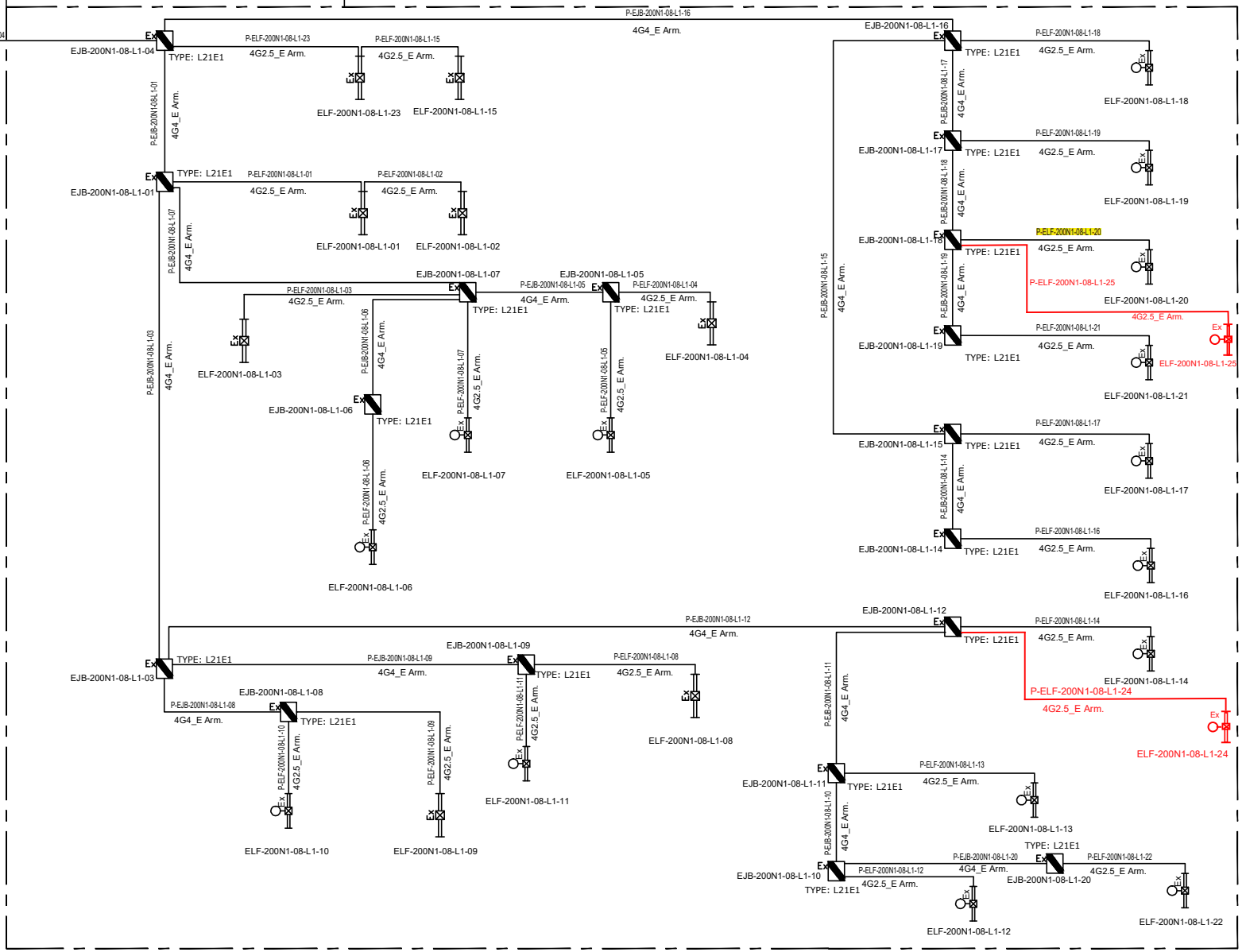
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

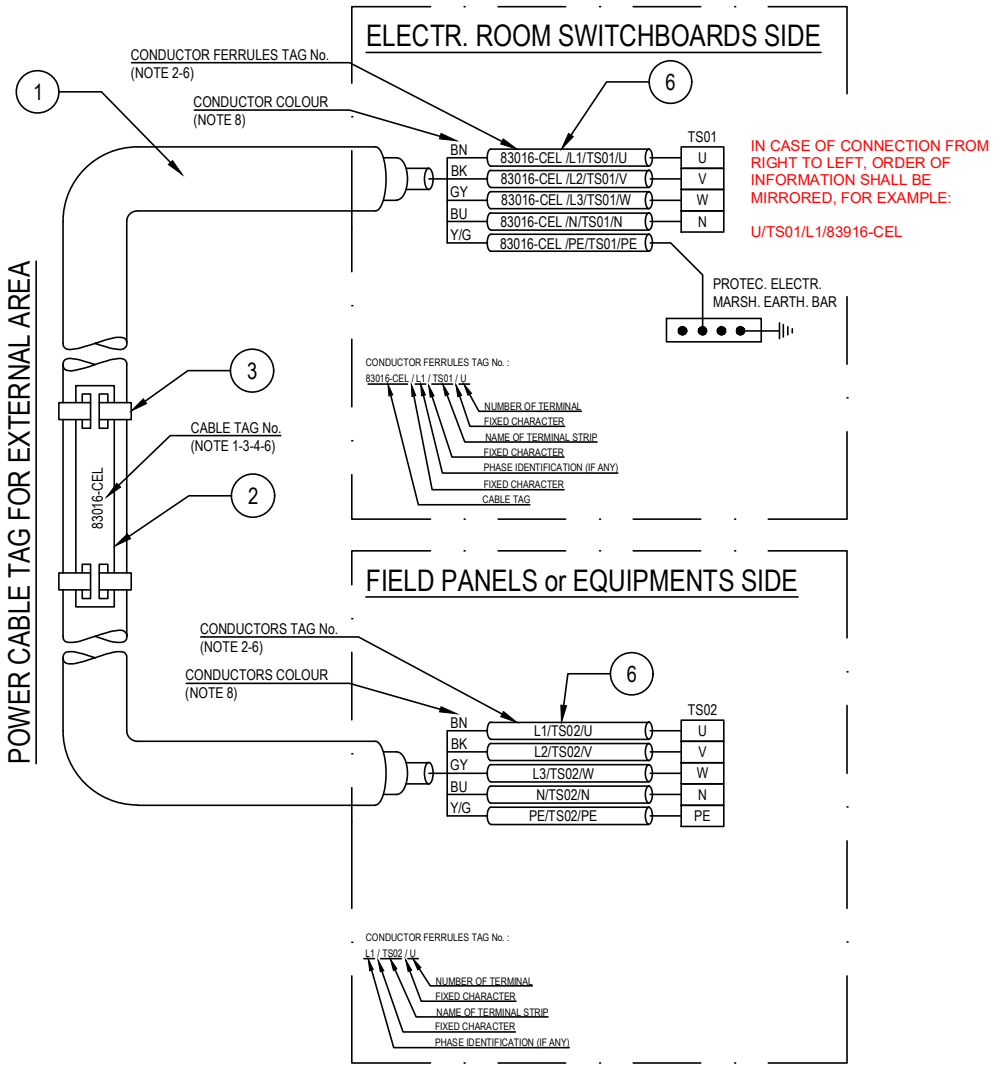
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
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2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
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5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

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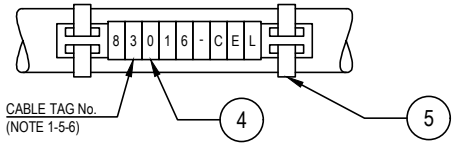
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- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

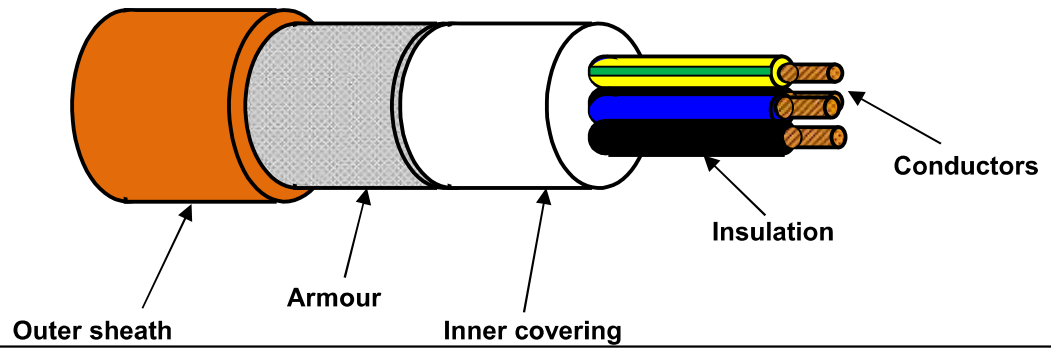
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-20	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-18	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-20	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CL2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-036

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-EJB-200N1-08-L1-19	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000743		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-18 To EJB-200N1-08-L1-19

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-EJB-200N1-08-L1-19	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000743		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,6	
6		PH 2	0,6	
7		PH 3	0,6	
8	ARMOUR CONTINUITY Ω		0,6	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,6	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

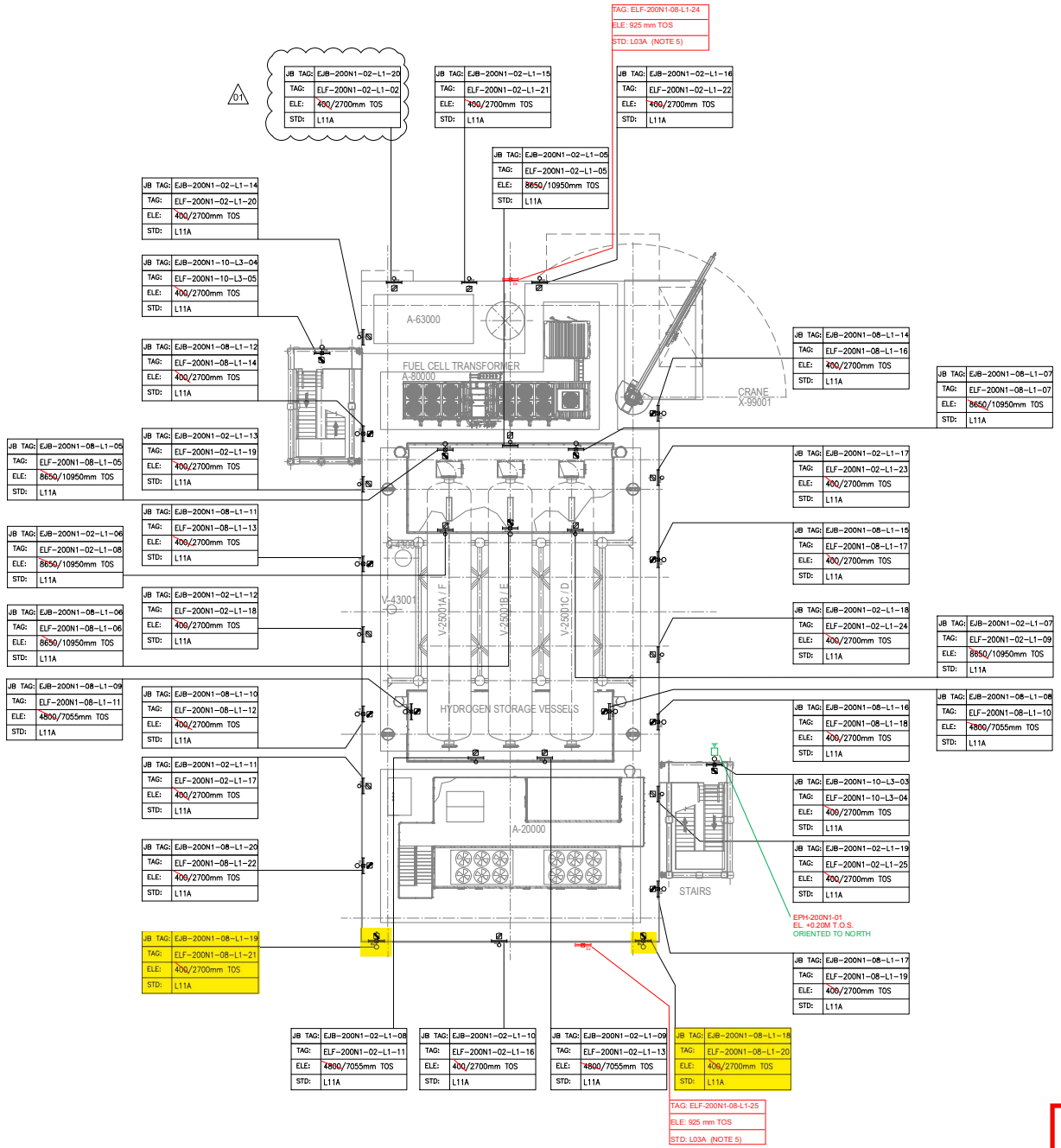
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

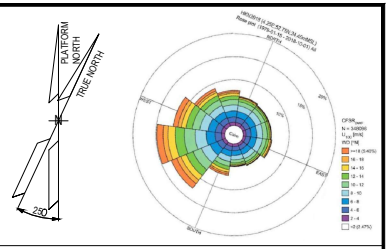
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:17:39.109Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:42:54.334Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

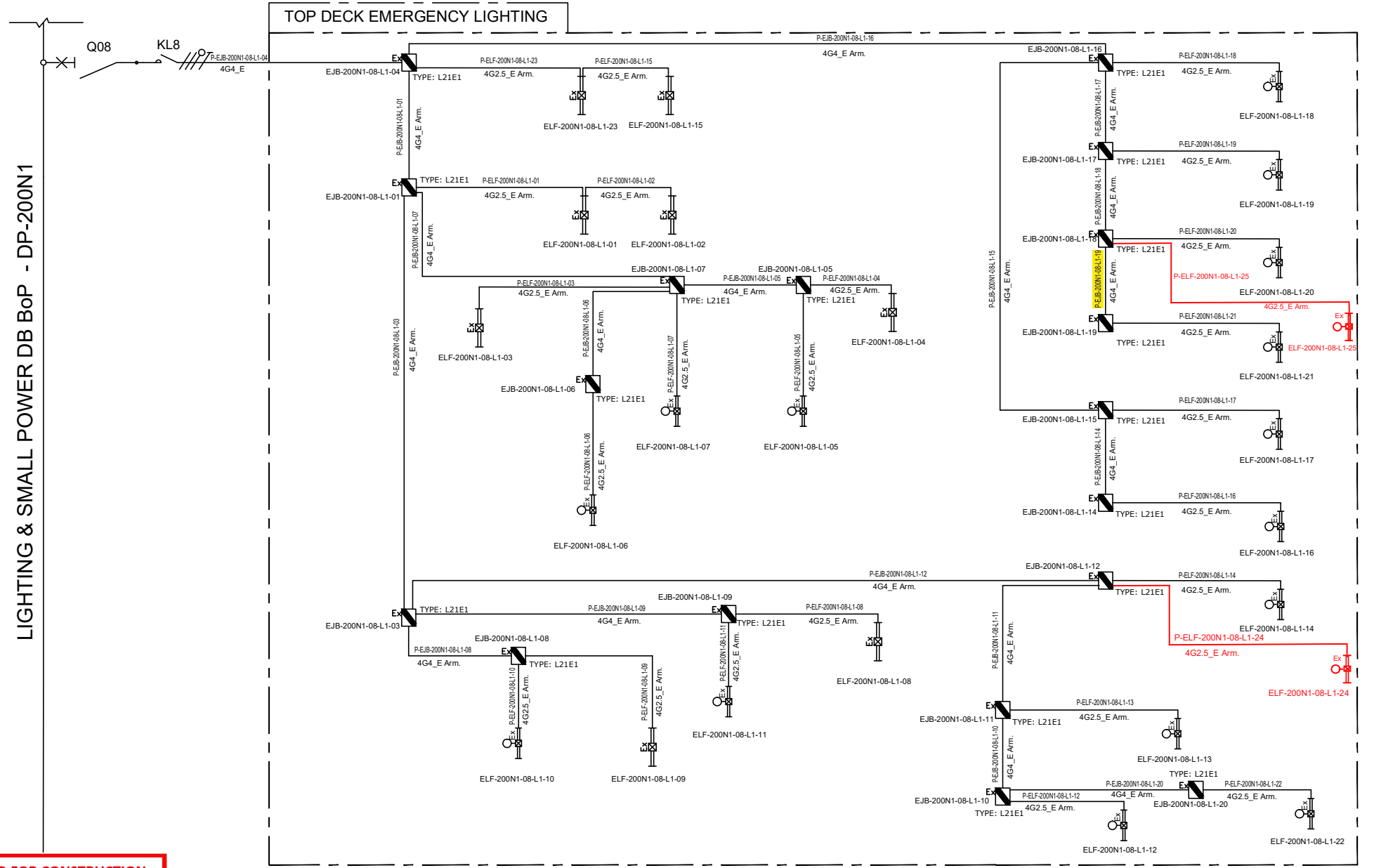
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

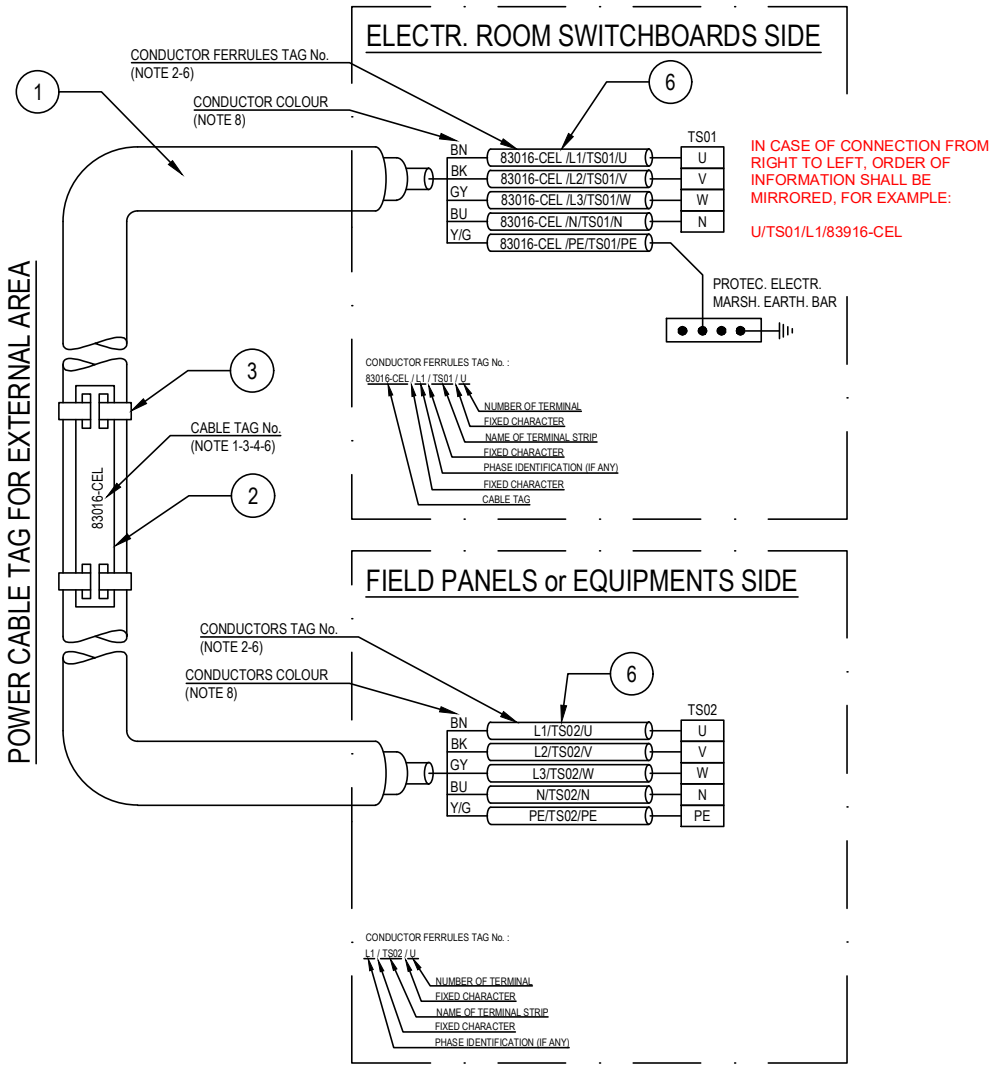
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

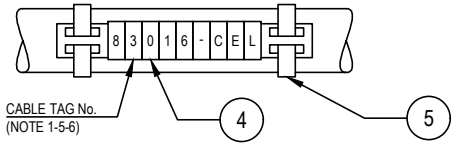
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

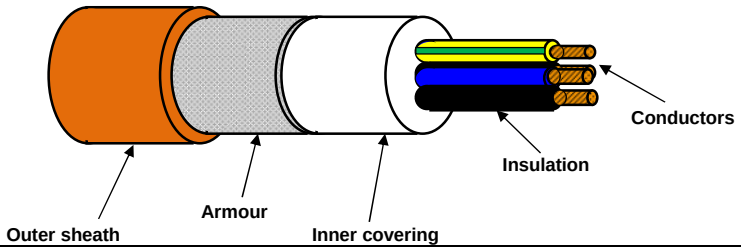
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-19	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-18	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-19	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-004

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-21	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000744		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E mm2 Color ORANGE

From EJB-200N1-08-L1-19 To ELF-200N1-08-L1-21

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-21	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000744		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

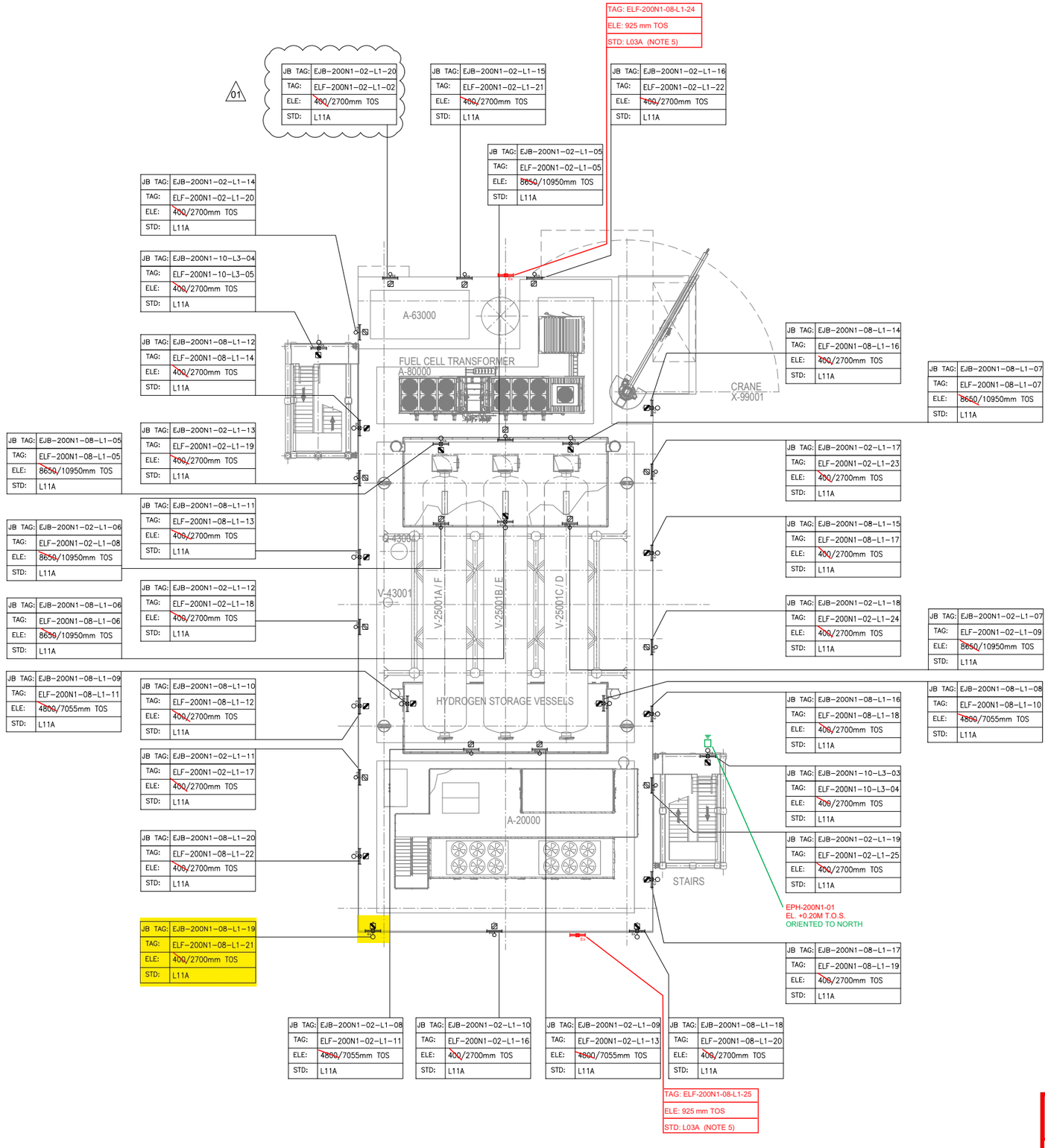
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

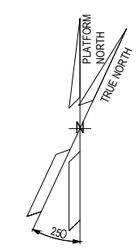
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-28	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-28T07:30:43.369Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T09:28:12.429Z	

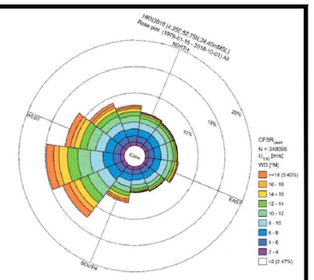
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

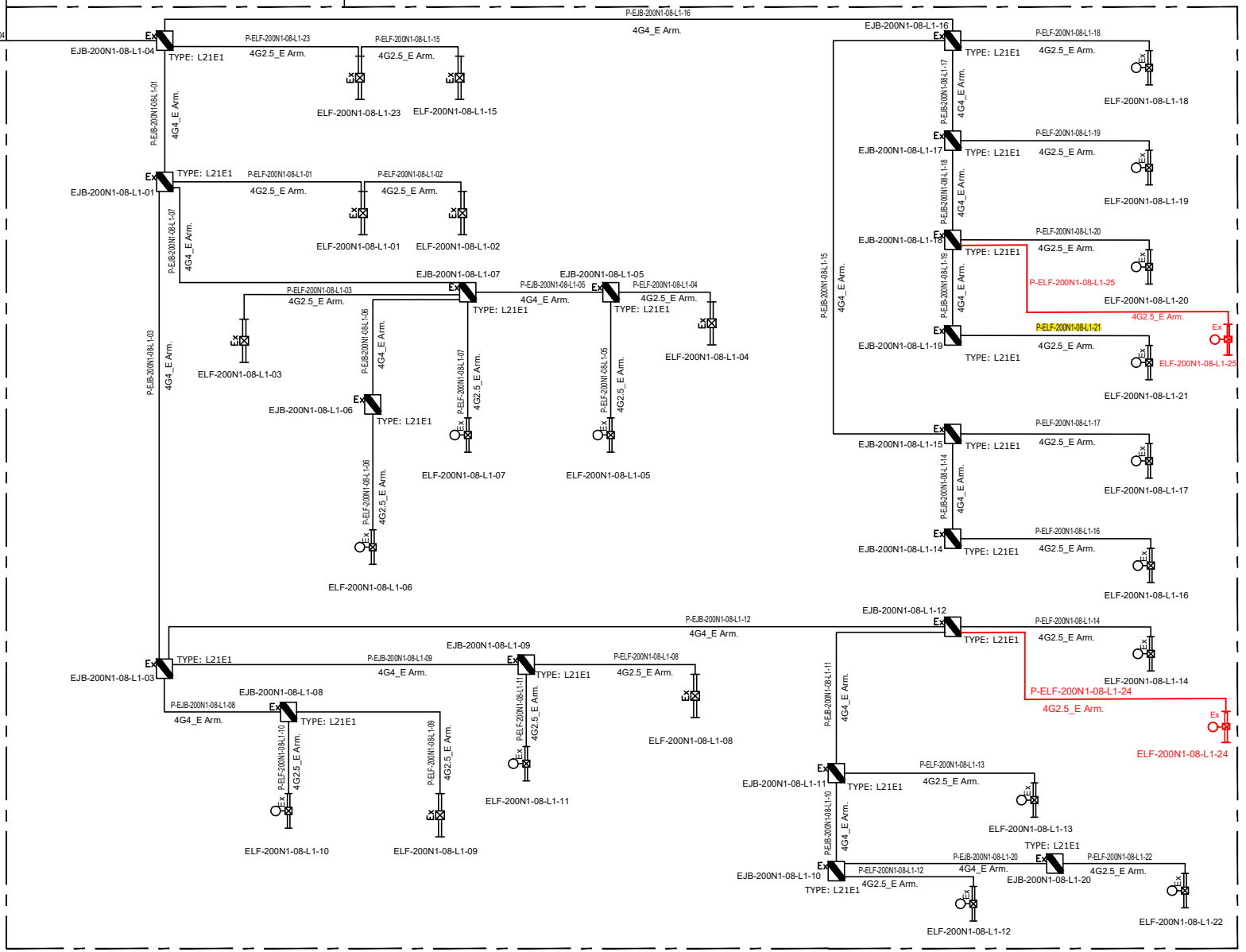
CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

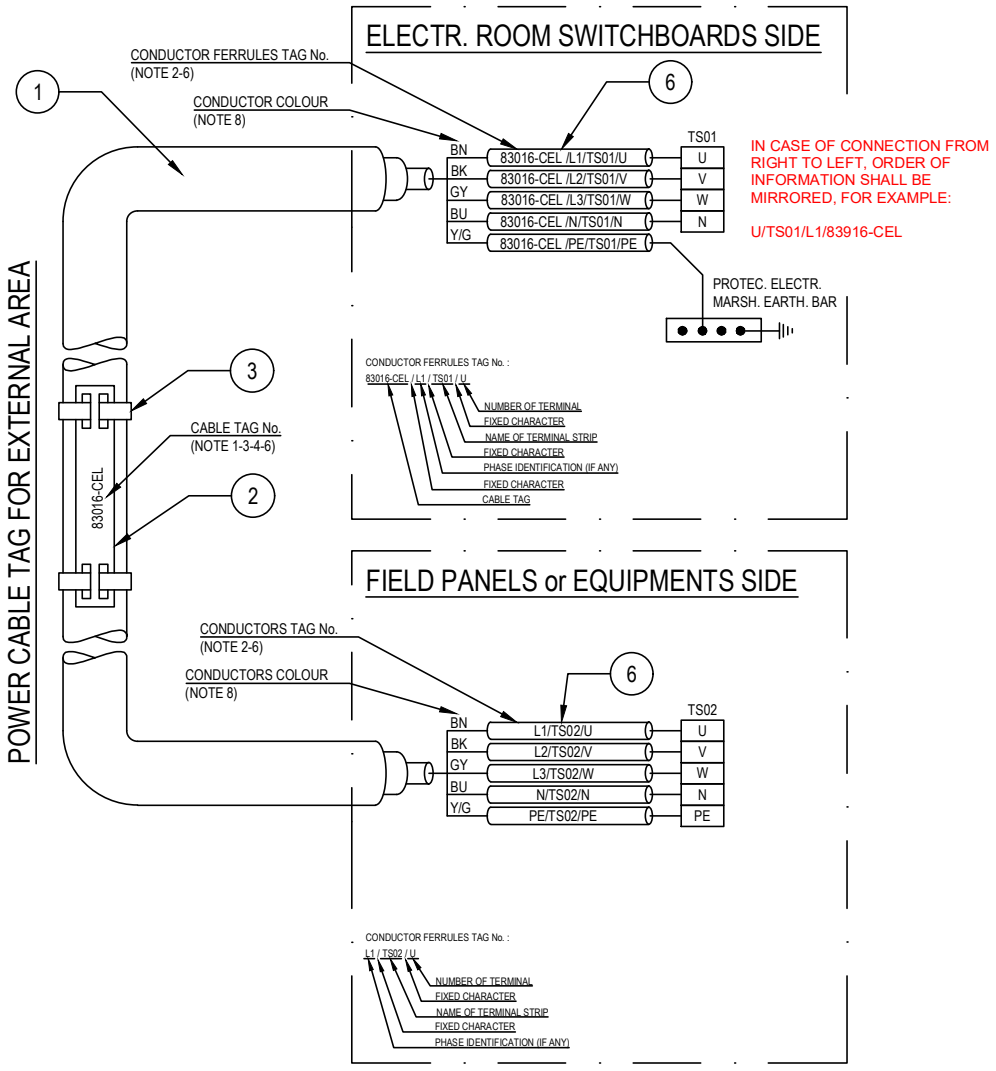
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

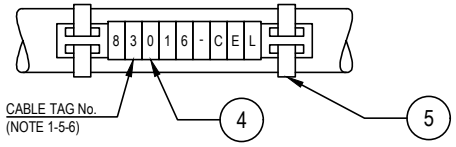
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

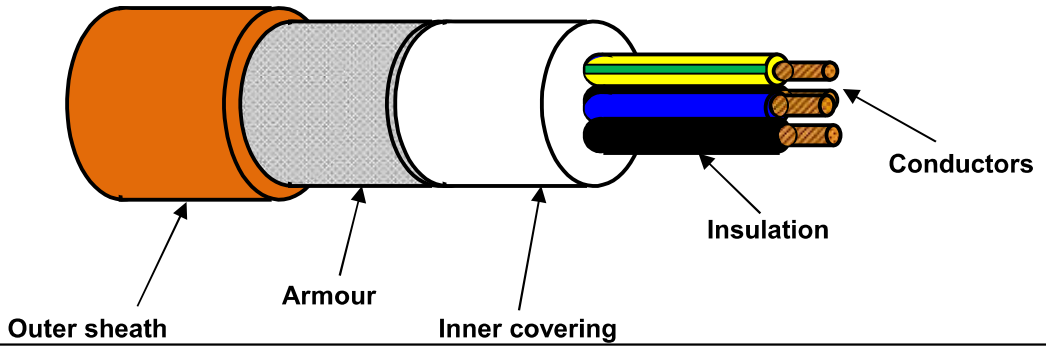
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-21	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-19	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-21	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Dou ble				L-50-102-LVT-034

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-EJB-200N1-08-L1-20	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000745		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G4_E mm2 Color ORANGE

From EJB-200N1-08-L1-10 To EJB-200N1-08-L1-20

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ITEM	Tag	P-EJB-200N1-08-L1-20	: Emergency Lighting JB / Emergency Lighting JB			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000745		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,6	
6		PH 2	0,6	
7		PH 3	0,6	
8	ARMOUR CONTINUITY Ω		0,6	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,6	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

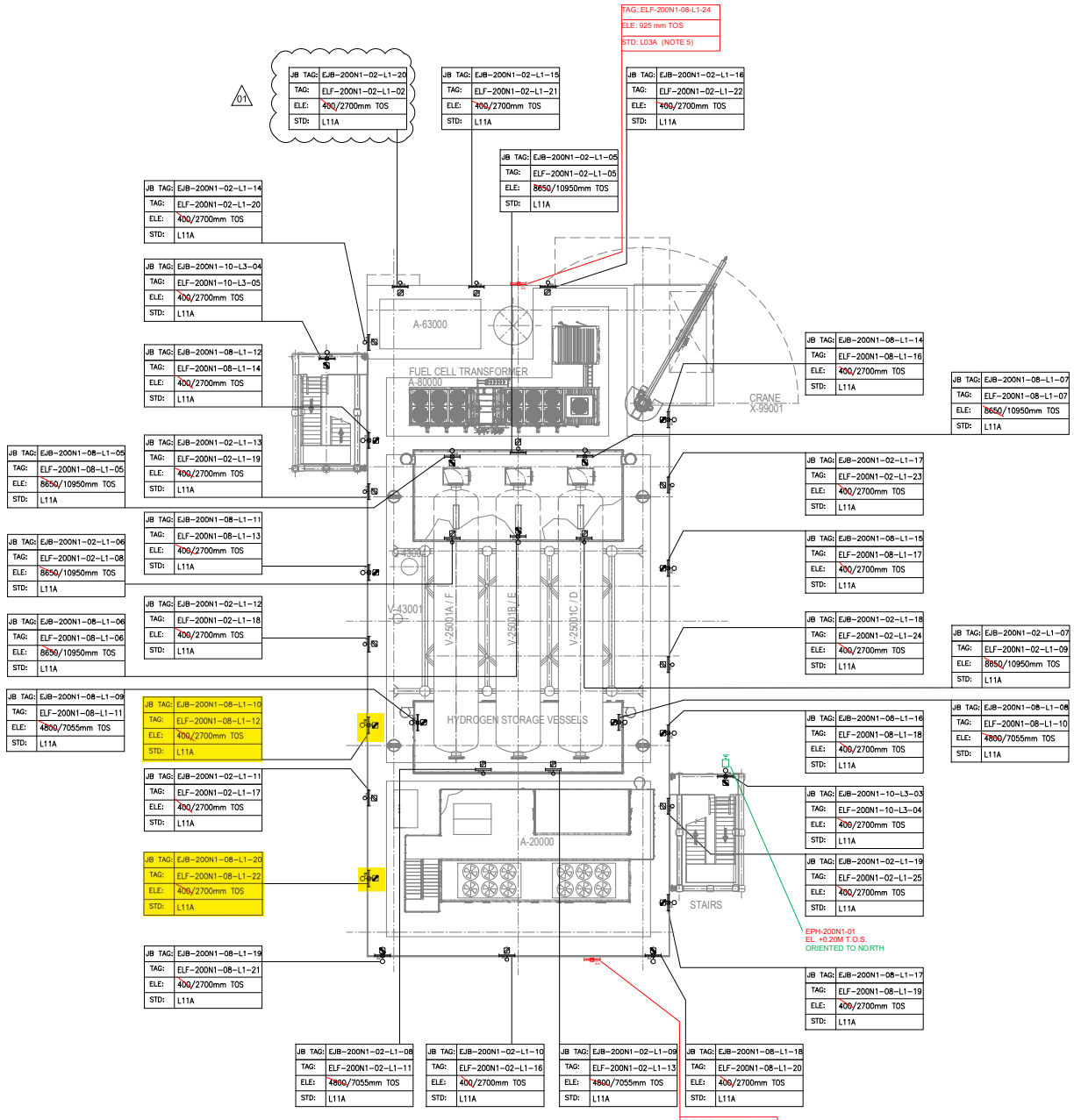
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

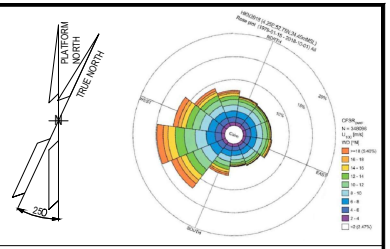
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-10	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:20:39.724Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-15T18:42:04.251Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

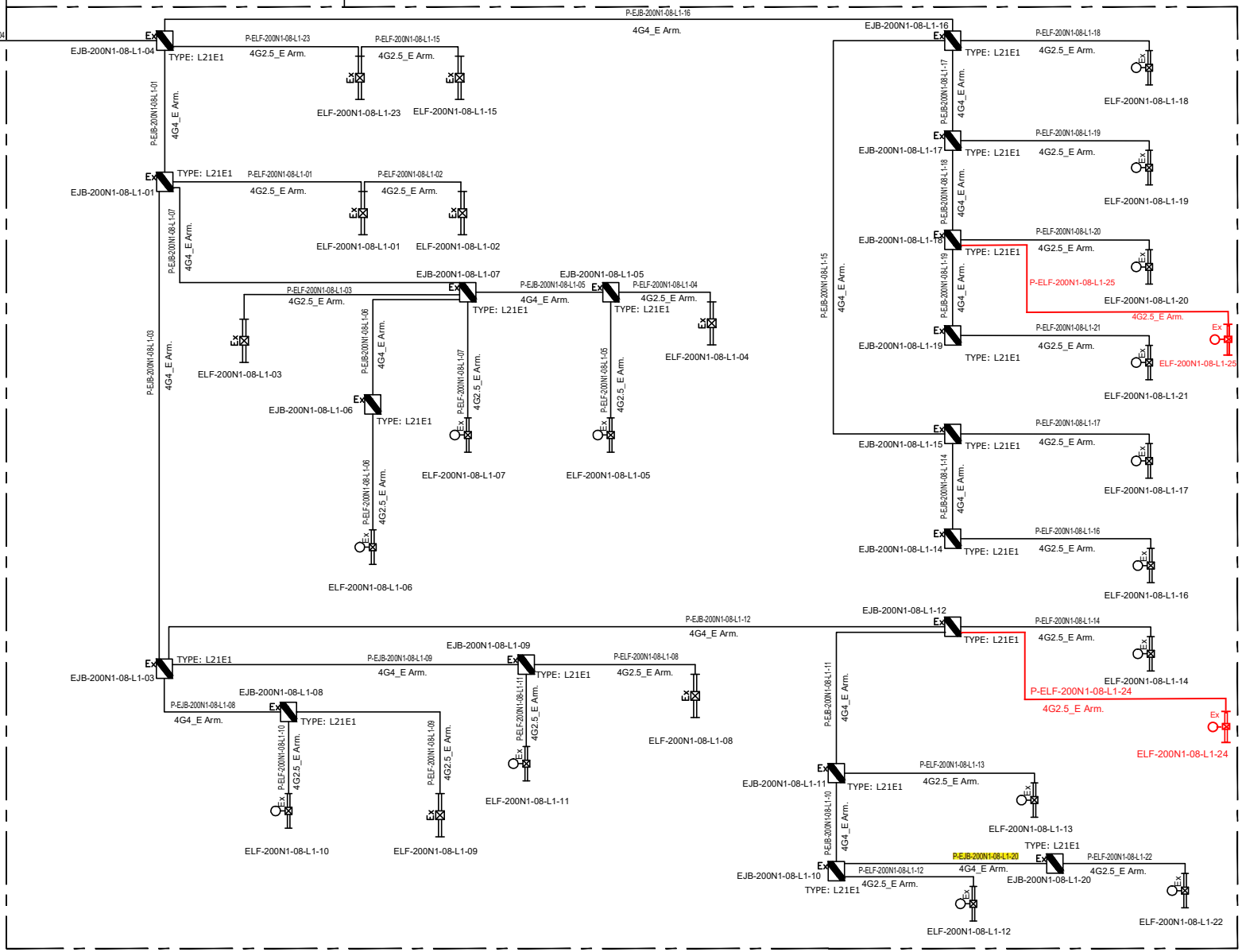
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

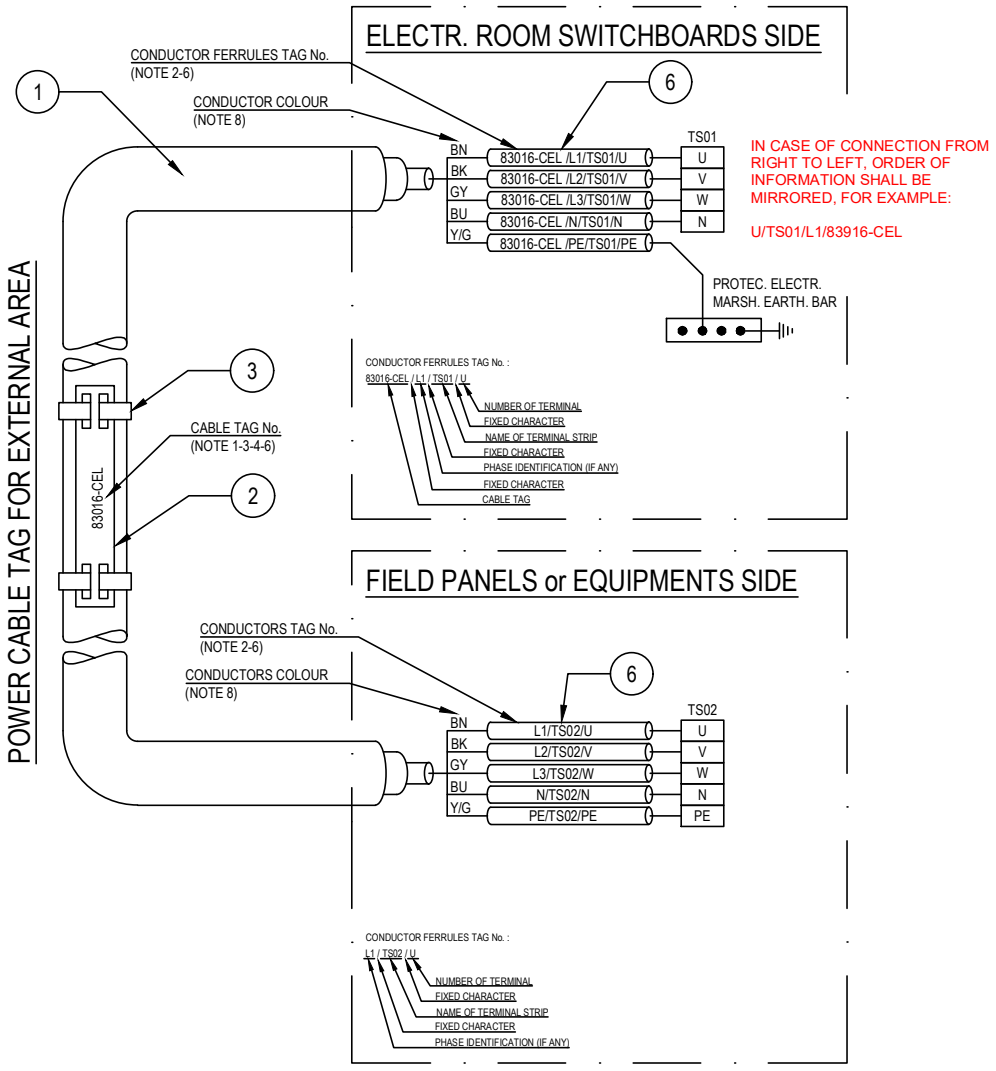
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
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5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

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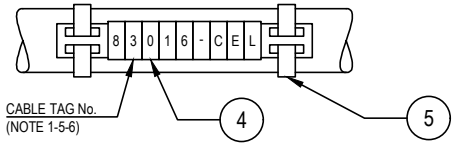
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- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

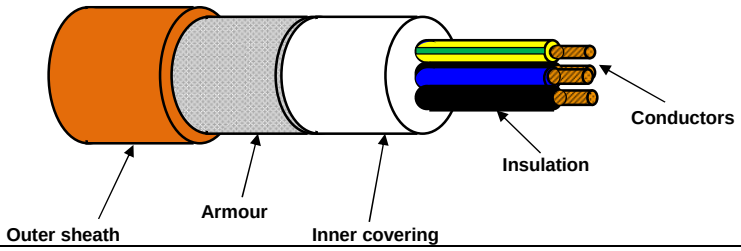
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-EJB-200N1-08-L1-20	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-10	Emergency Lighting JB	Upper Deck		EJB-200N1-08-L1-20	Emergency Lighting JB	Upper Deck		ELECV21-4G4_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G4mm²_E - Orange	M25S	T2_M25S_Double			T2_M25S_Double				L-150-102-LVT-006

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	P-ELF-200N1-08-L1-22	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000746		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type	Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH	Cores/Size mm²	4G2,5_E mm2	Color	ORANGE

From EJB-200N1-08-L1-20 To ELF-200N1-08-L1-22

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	PL
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	PL
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-22	: Emergency Lighting JB / Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10000746		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

	CONTINUITY			
5	CORE CONTINUITY Ω	PH 1	0,2	
6		PH 2	0,2	
7		PH 3	0,2	
8	ARMOUR CONTINUITY Ω		0,2	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,2	
	INSULATION			
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

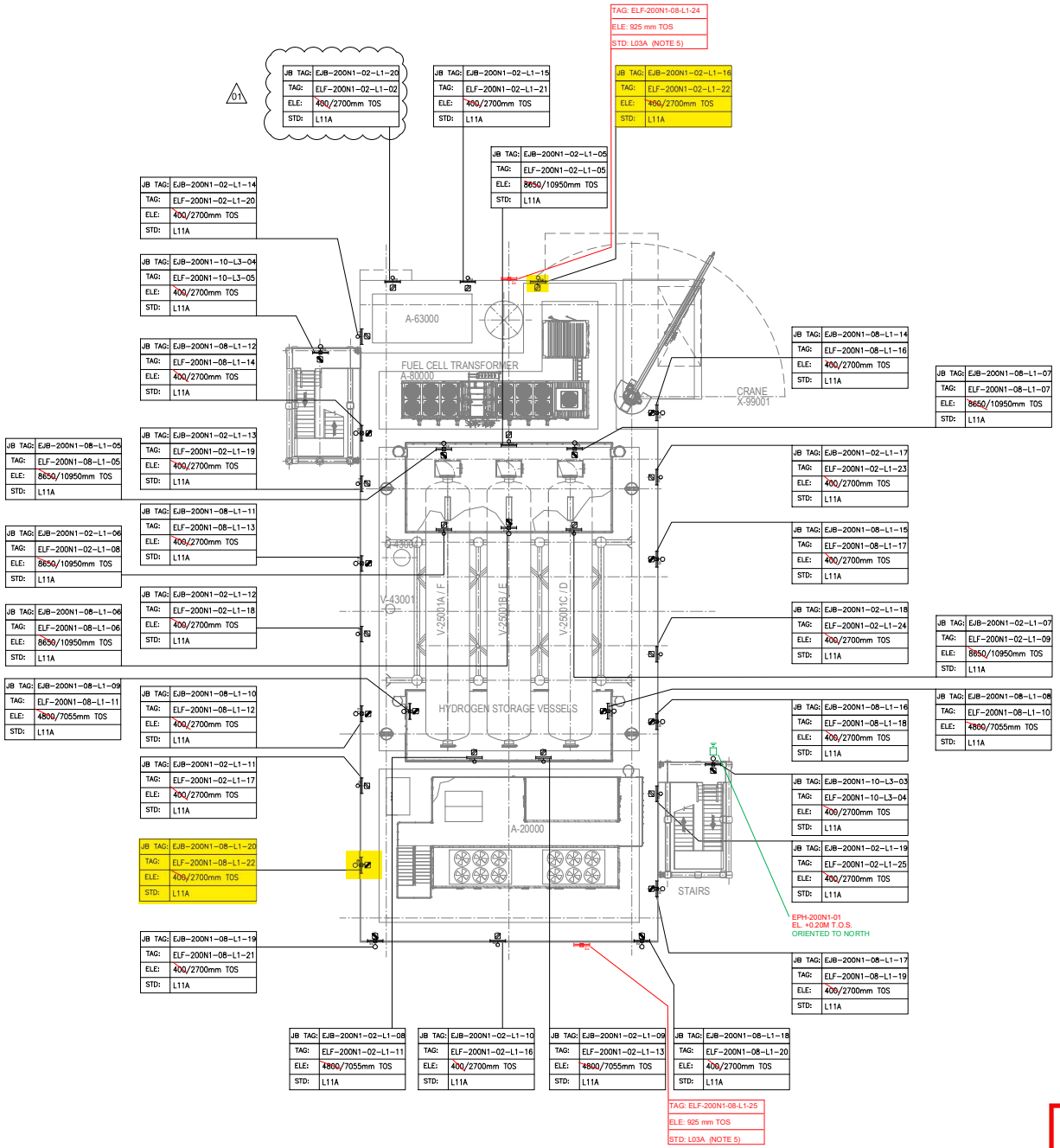
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000679

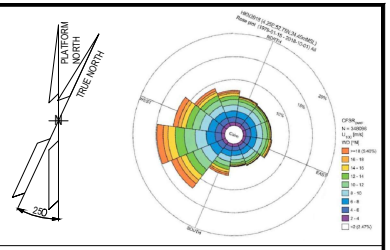
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-28	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-28T07:30:55.082Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T09:00:45.167Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

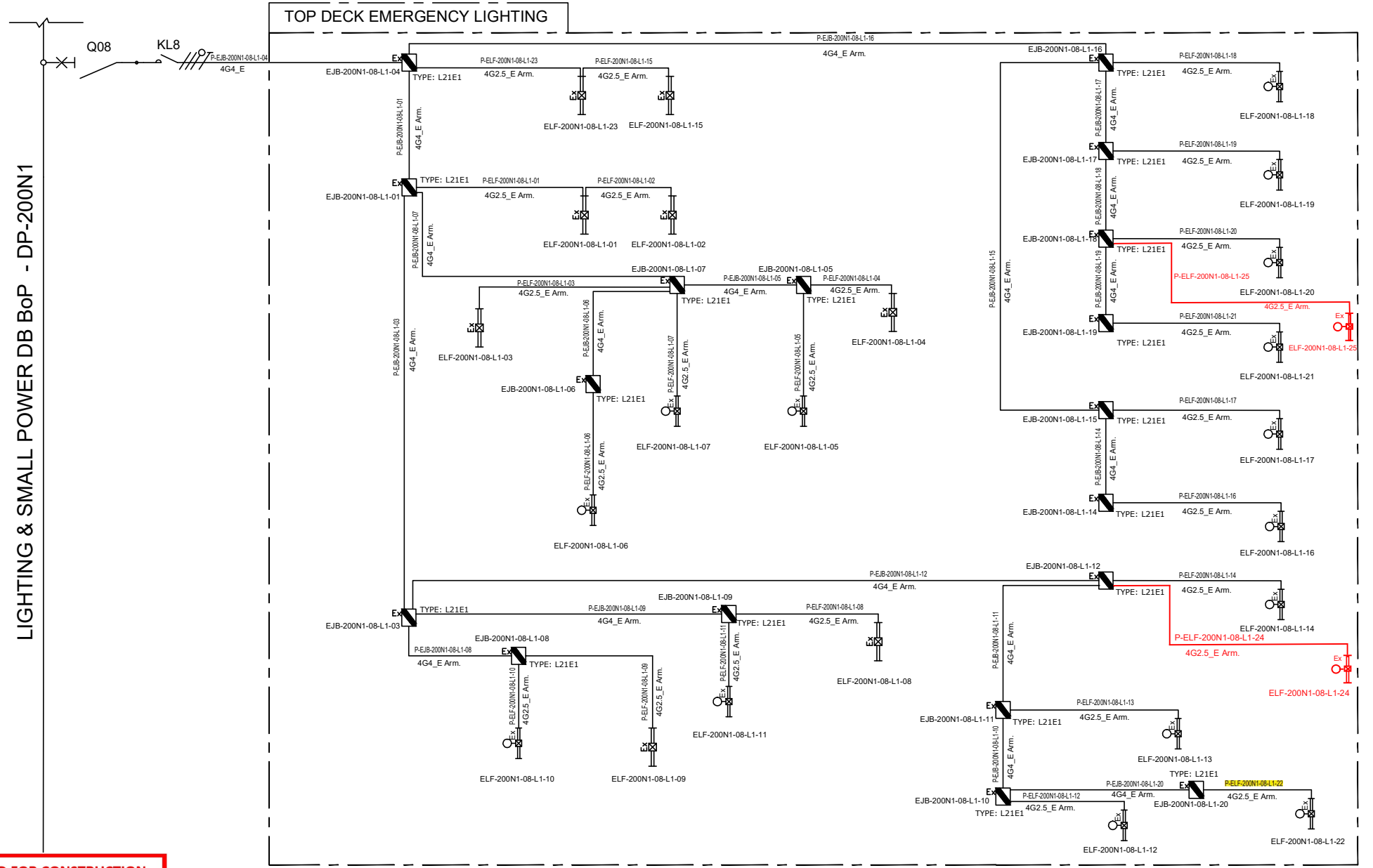
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

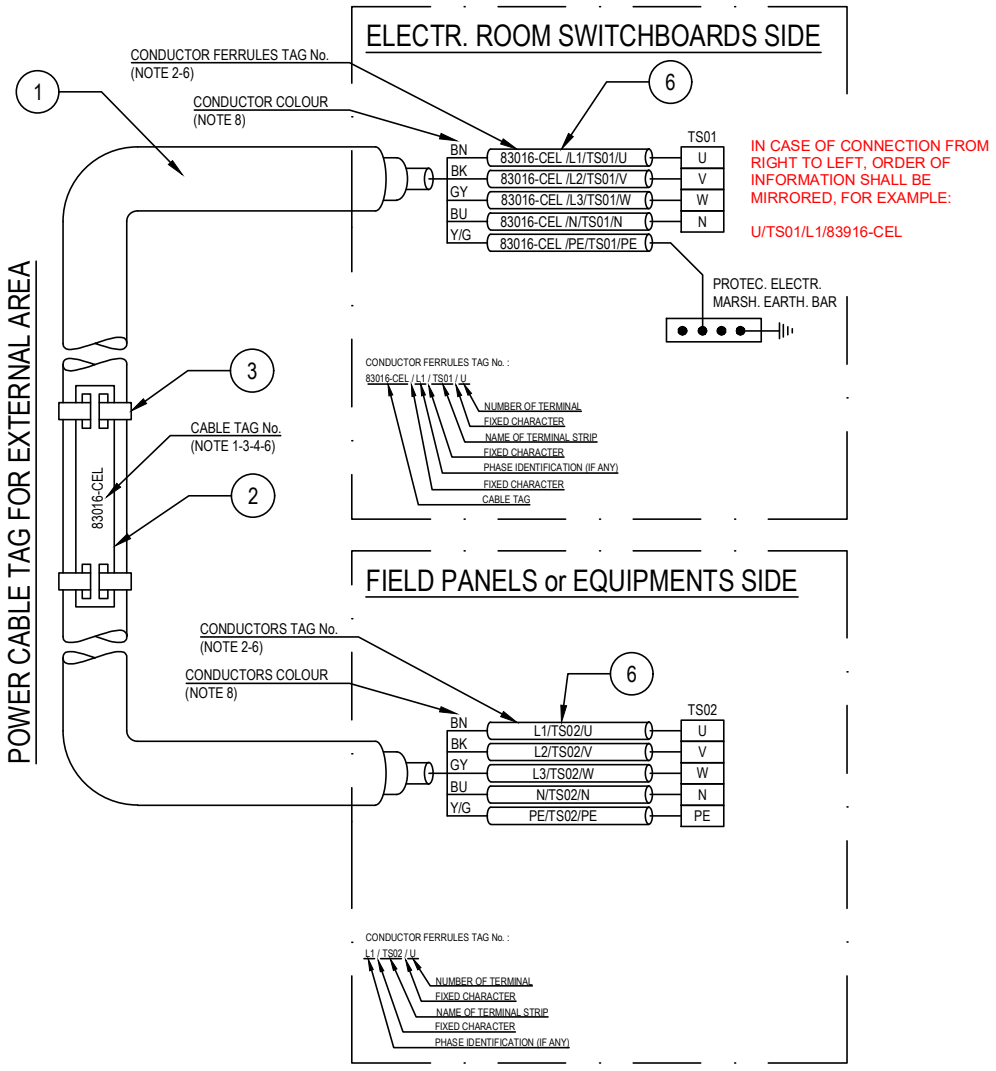
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

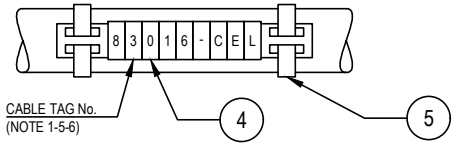
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

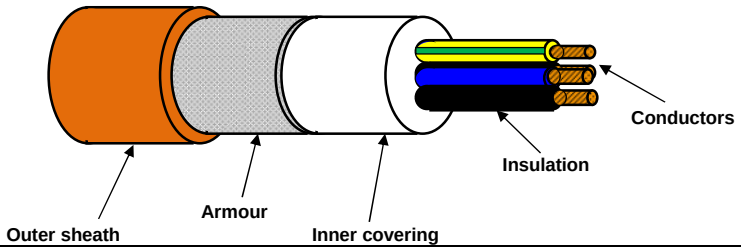
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-22	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-20	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-22	Emergency Lighting Fixture	Upper Deck		ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Double				L-50-102-LVT-033

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G4_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G4 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(14,3 ± 10%) mm
Over Armour diameter :	(15,5 ± 10%) mm
Outer diameter :	(18,3 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 790 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-23	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001358		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 Miscellaneous Electrical Equipment

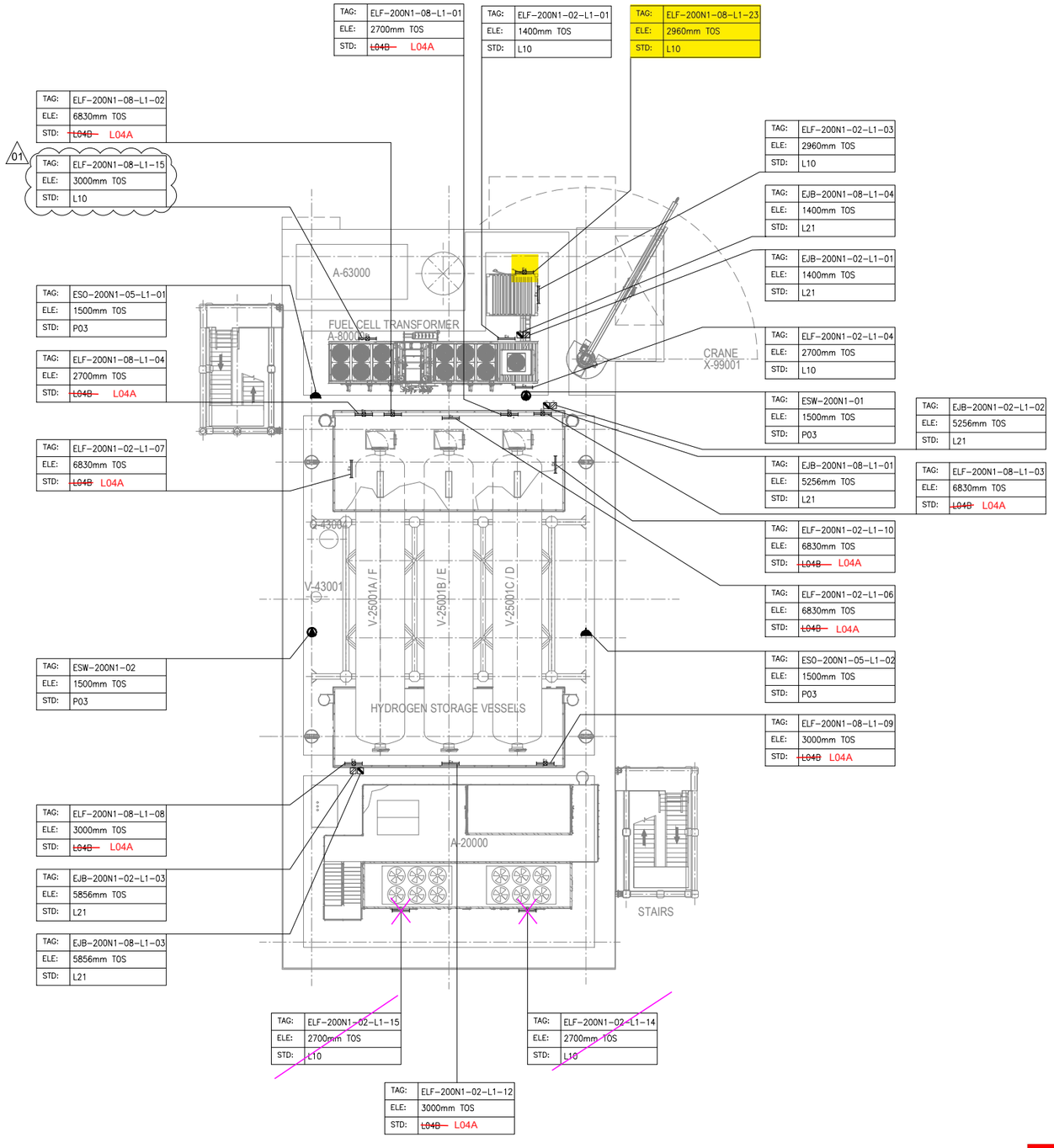
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	PL
4	Check nameplate data is correct.	NA
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

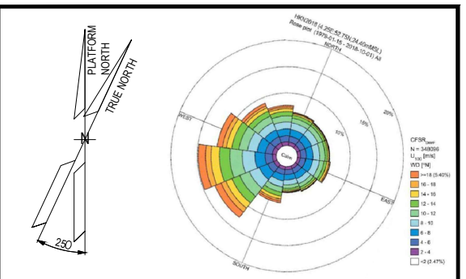
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Andrea Andreani	
Date	2025-01-10	2025-01-23	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:25:49.748Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-23T16:28:24.185Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

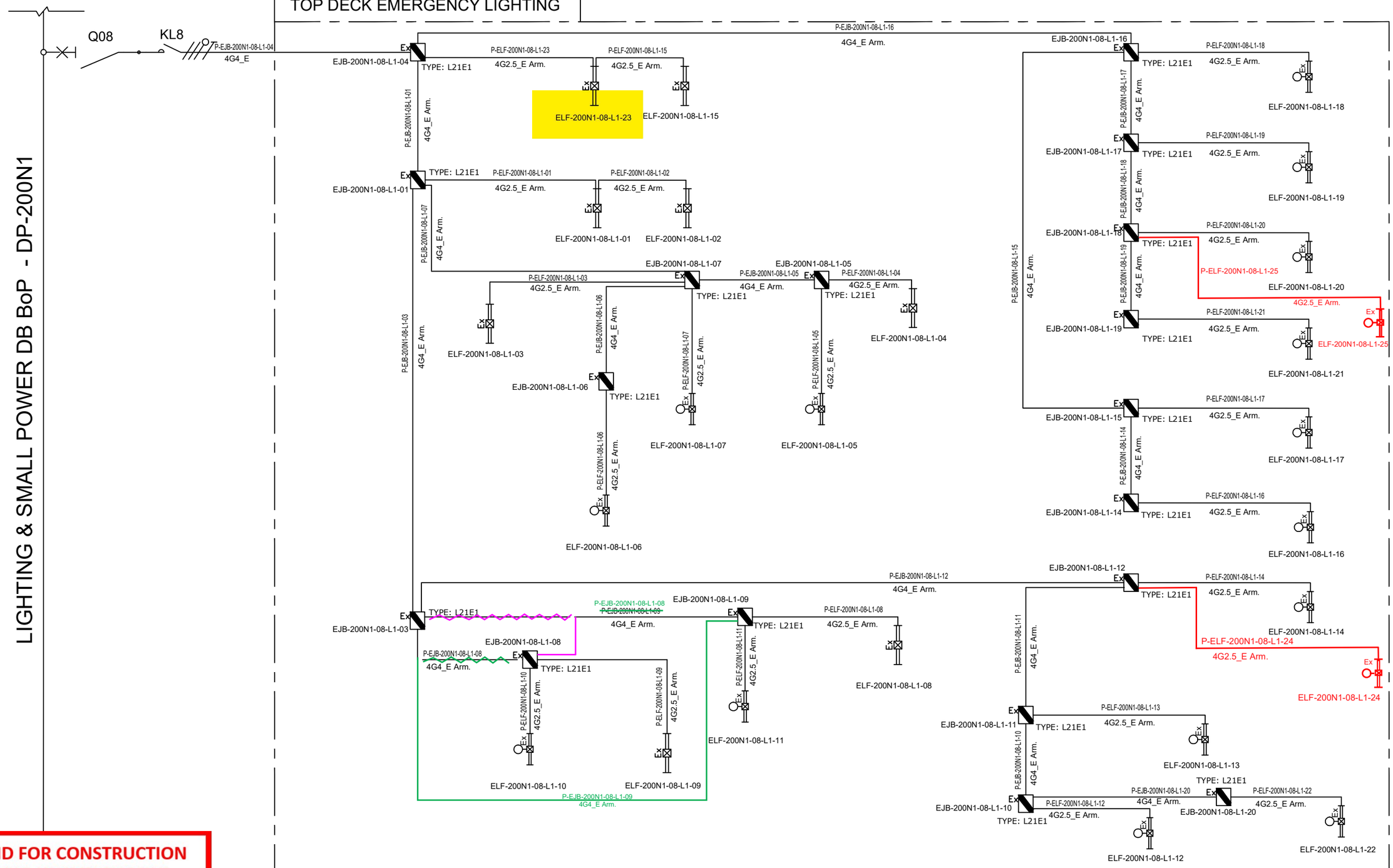
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO		DATE	01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118			SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

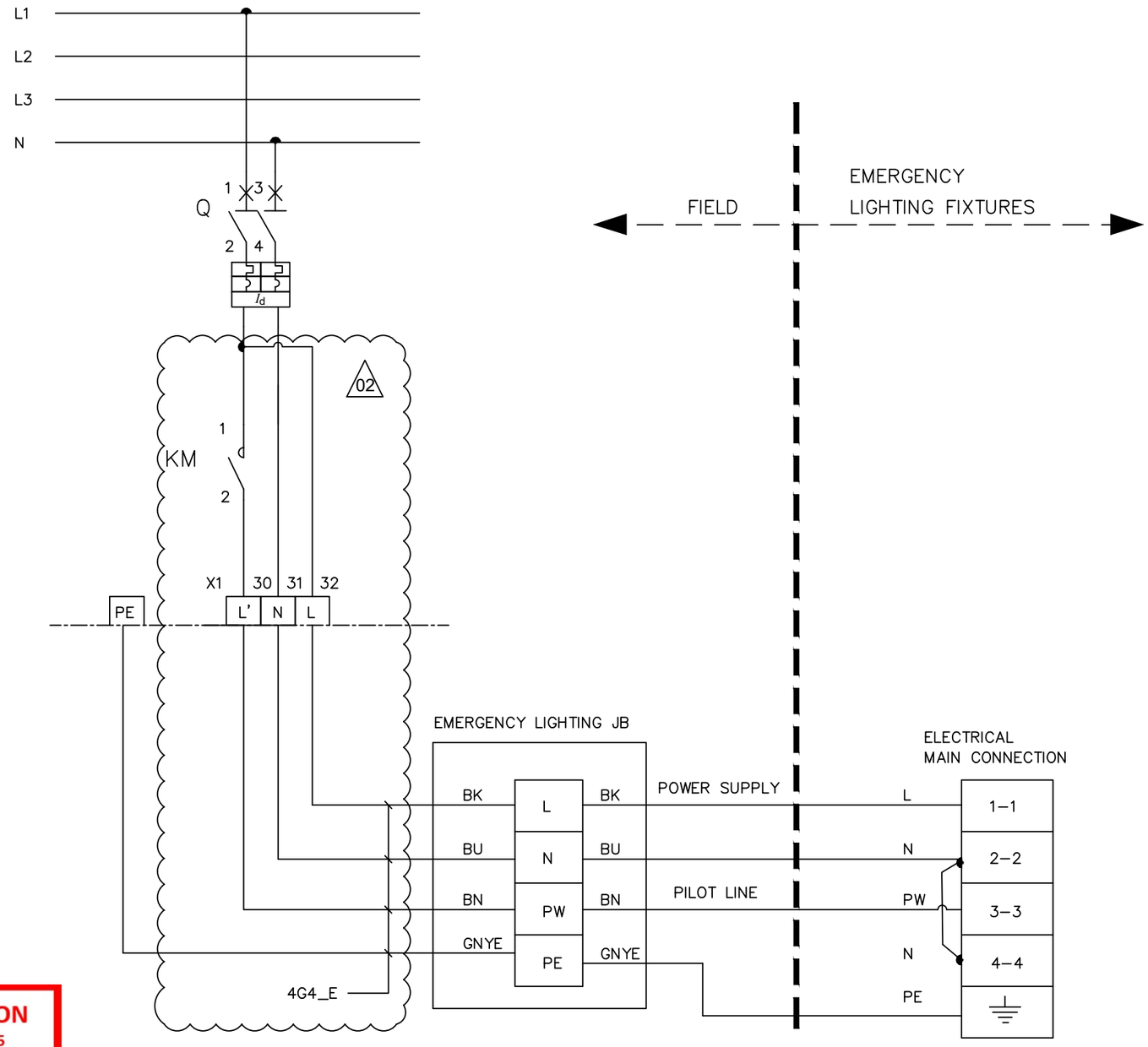
REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz



L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

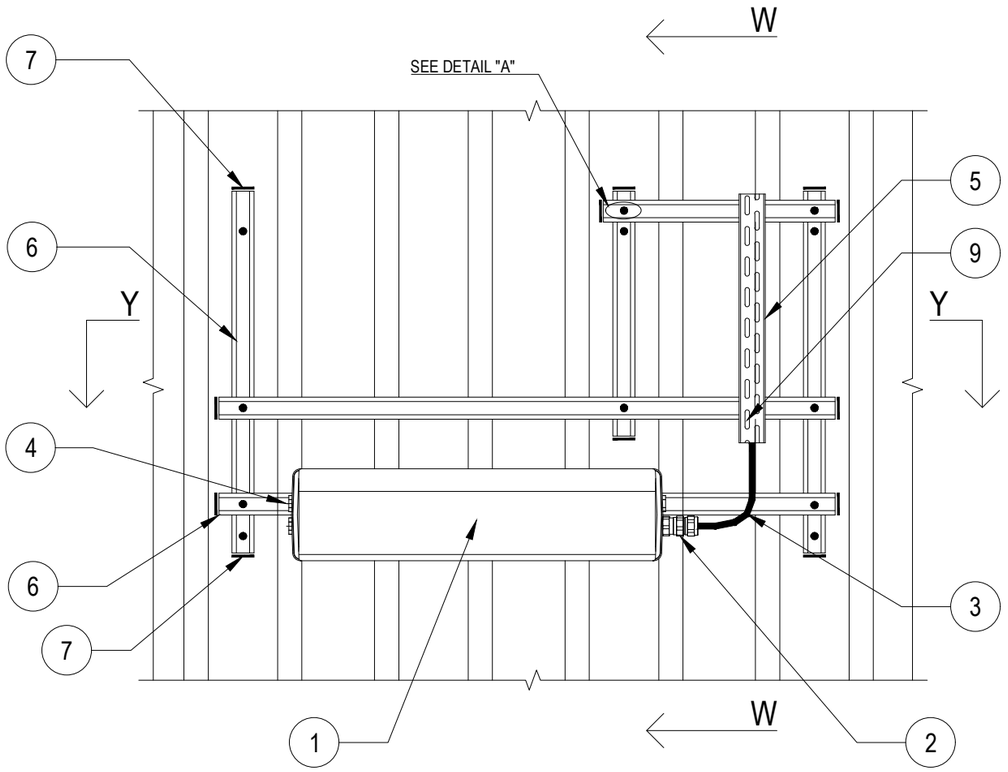
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

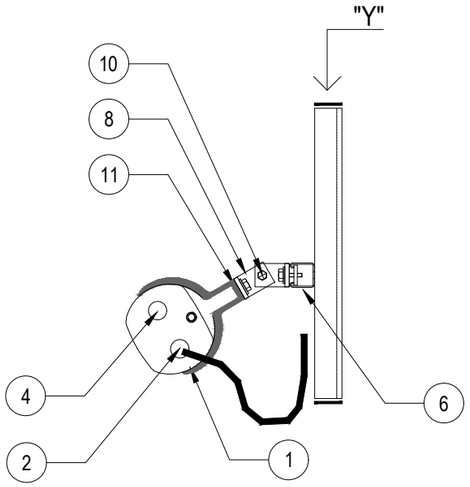
File Name : 123A90–DDL–EL–DG–20125

L10

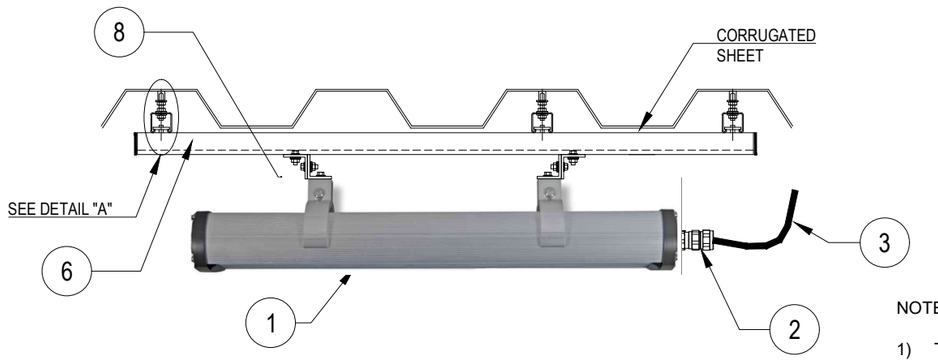


02

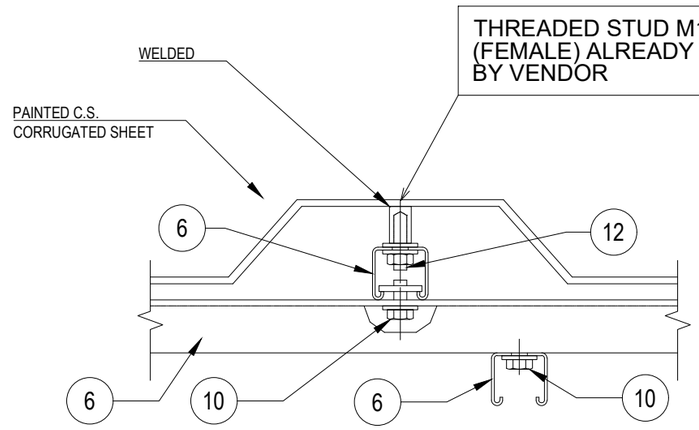
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		AS REQ.	NOTE 2 NOTE 4
3	ARMOURED/UNARMOURED CABLE				NOTE 4
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE TRAY	AISI 316L			
6	SINGLE U-CHANNEL PERFORATED ON NO.3 SIDE	AISI 316L	41x41x2		NOTE 1
7	PLUG FOR U-CHANNEL	LPDE		AS REQ.	
8	ANGLE PLATE FOR ORTOGONAL-TRASV. CONNECTION WITH NO. 2 HOLES FOR UNISTRUT PROFILE 41x41x2X2	AISI 316L		4	
9	DOUBLE SLOT CROWNED HEAD SCREW WITH NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x20		
10	HEX. BOLT WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10x30	4	
11	HEX. BOLT WITH PLANE WASHER	AISI 316L	M8x16	2	
12	THREADED ROD COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



SECTION "W-W"



SECTION "Y-Y"



DETAIL "A"

NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON WALL WITH U–CHANNEL

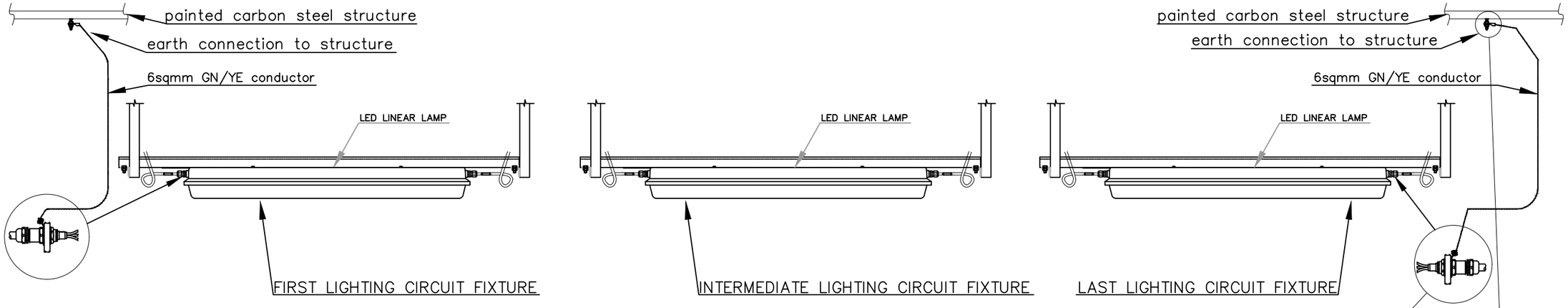
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 012 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

E32

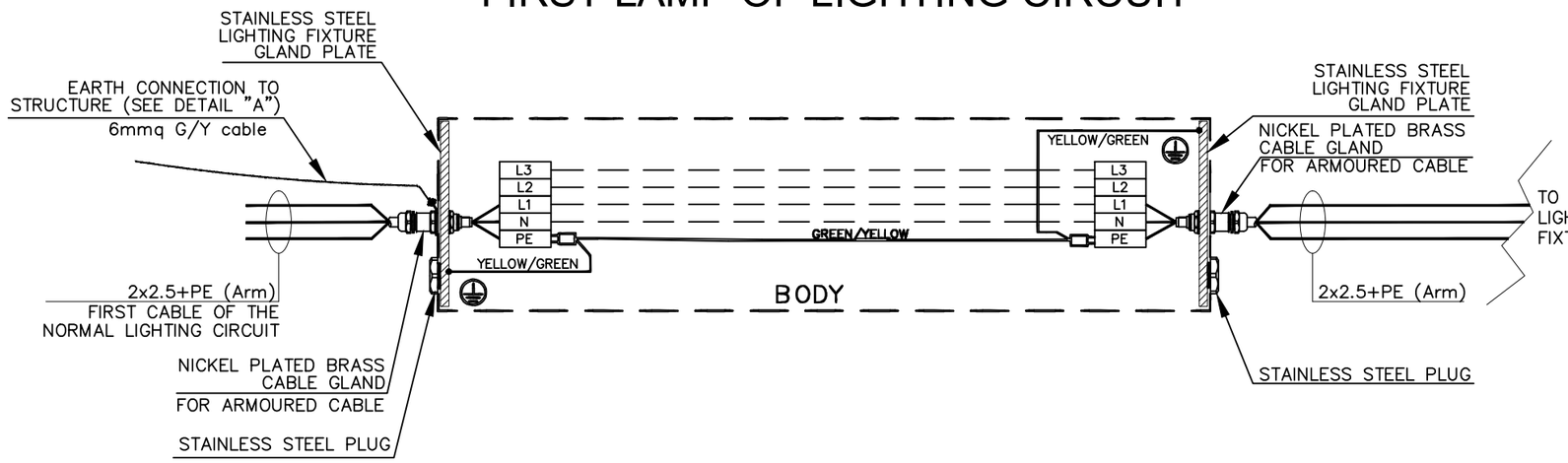


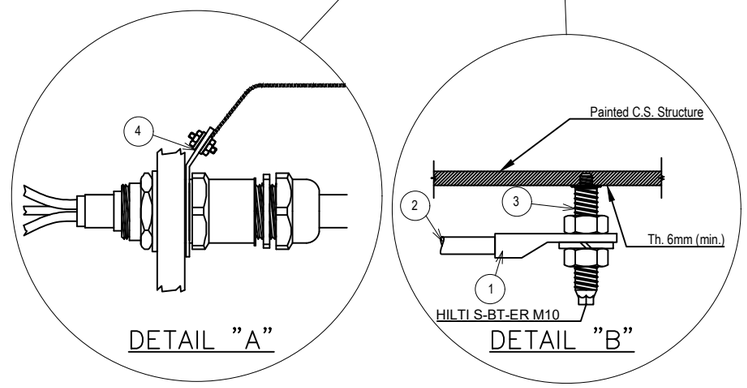
ONLY the first and the last lighting fixture of all circuits are connected to earthing system. The earthing continuity of the intermediate lighting fixtures of the circuits is guaranteed by the using of the first and the last lighting fixture earthing connection which is permanently connected to the earthing system as per the typical below.

Refer also to TYP. "E05" for Lighting Fixtures.

NORMAL LIGHTING CIRCUIT EARTHING CONTINUITY TYPICAL

FIRST LAMP OF LIGHTING CIRCUIT





POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			
2	Y/G INSULATING COPPER CONDUCTOR		6sqmm	ASR	
3	HILTI S-BT-ER M10/15 SN6 C/W NUTS AND GROWER	AISI 316L	M10X28		NOTE 1
4	CABLE GLAND EARTH TAG	NPB	M20		

The same logic is used for the earthing continuity of Emergency Lighting Circuits. The above typical has been done to represent the Earthing Continuity of G/Y conductors, the correct connections of all conductors in the respective Terminal Strips are shown in doc. AR-FEN-10-ROEC-600132 Lighting and Socket Circuit Diagrams.

NOTES:
1) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM FOR SINGLE EQUIPMENTS EARTHING CONNECTION.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING – OUTDOOR LINEAR LIGHTING FIXTURE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 023 | REV. 02

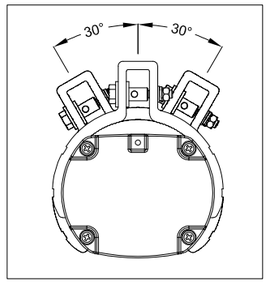
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

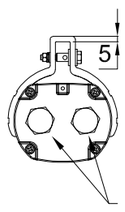
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

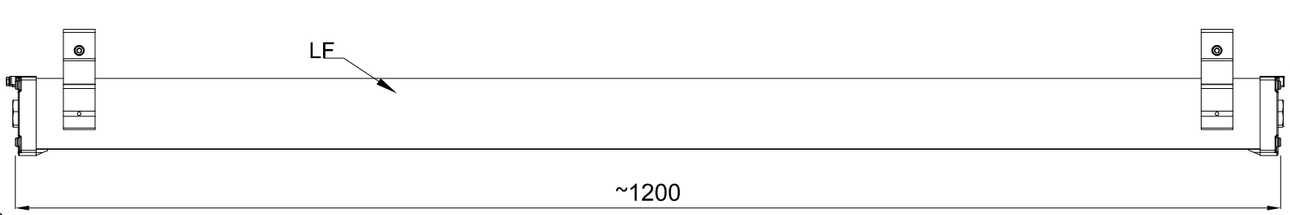
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

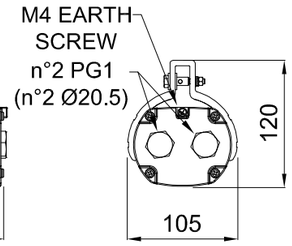


n°2 PG1
(n°2 Ø20.5)

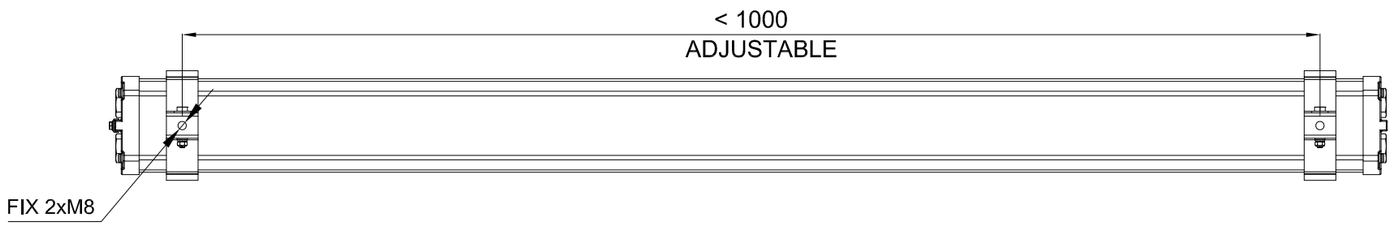
FRONT SIDE



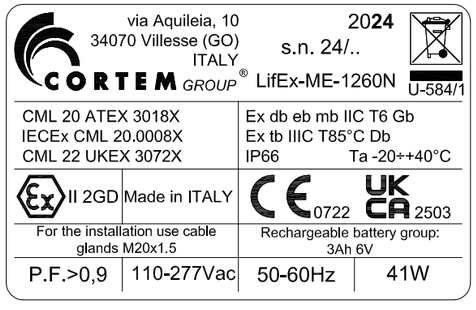
RIGHT SIDE (IN)



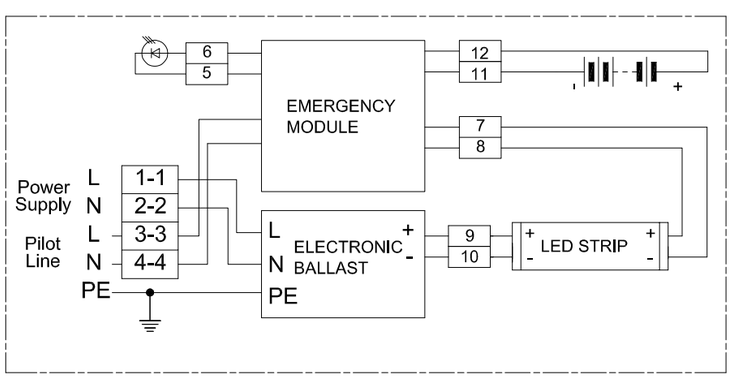
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ROSETTI MARINO

CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-17	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001648		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX31 Junction and Marshalling Box

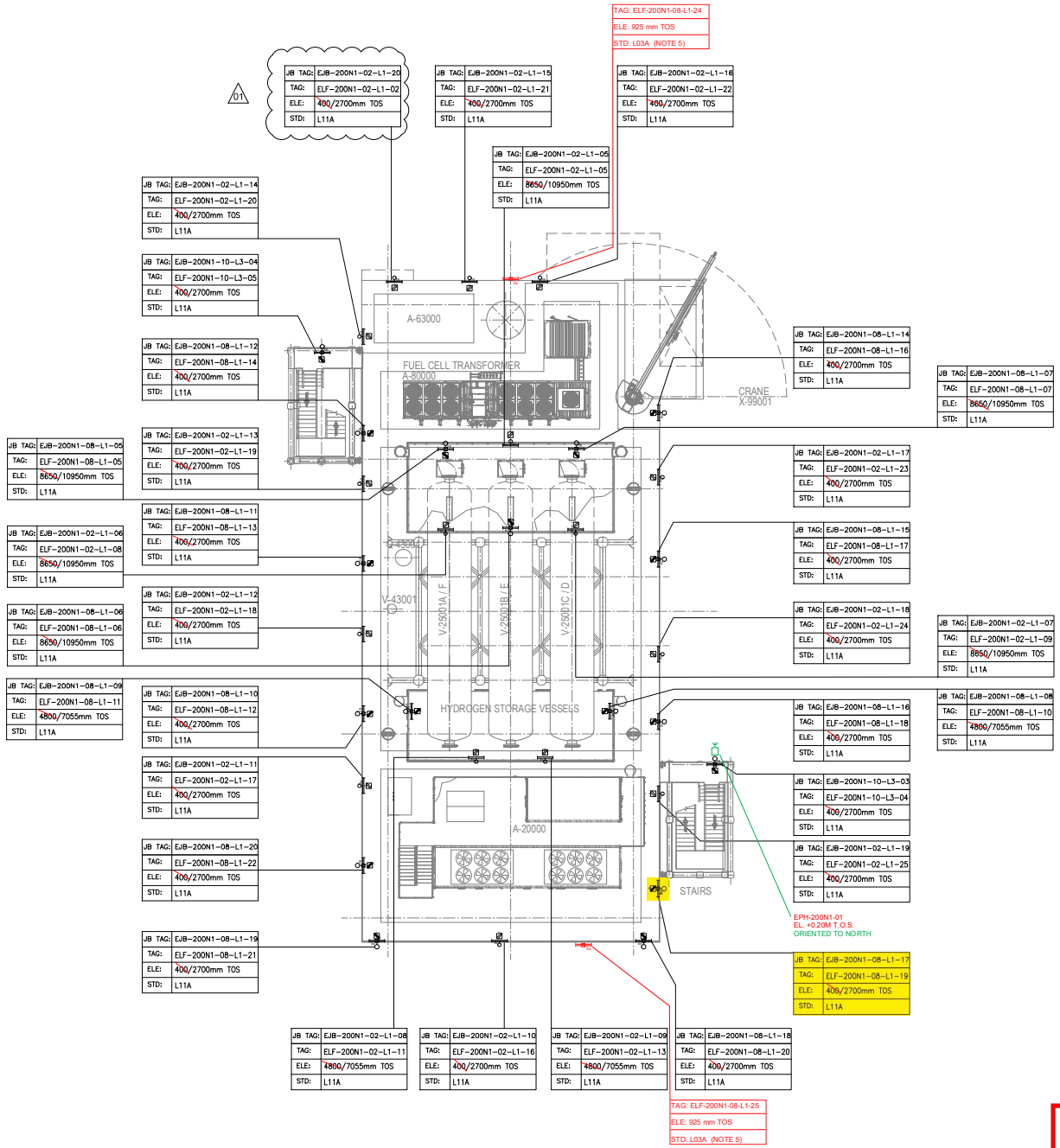
1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	OK
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK
7	Check all bolts are fitted and correcly tighted .	OK
8	Check all unused entries are suitably plugged.	OK
9	Check earthing and bonding against drawings.	OK
10	Check terminal blocks segregation barriers are fitted where necessary.	NA
11	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

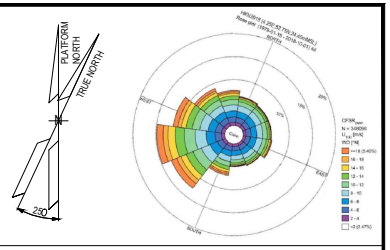
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:32:24.402Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-16T15:18:26.622Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

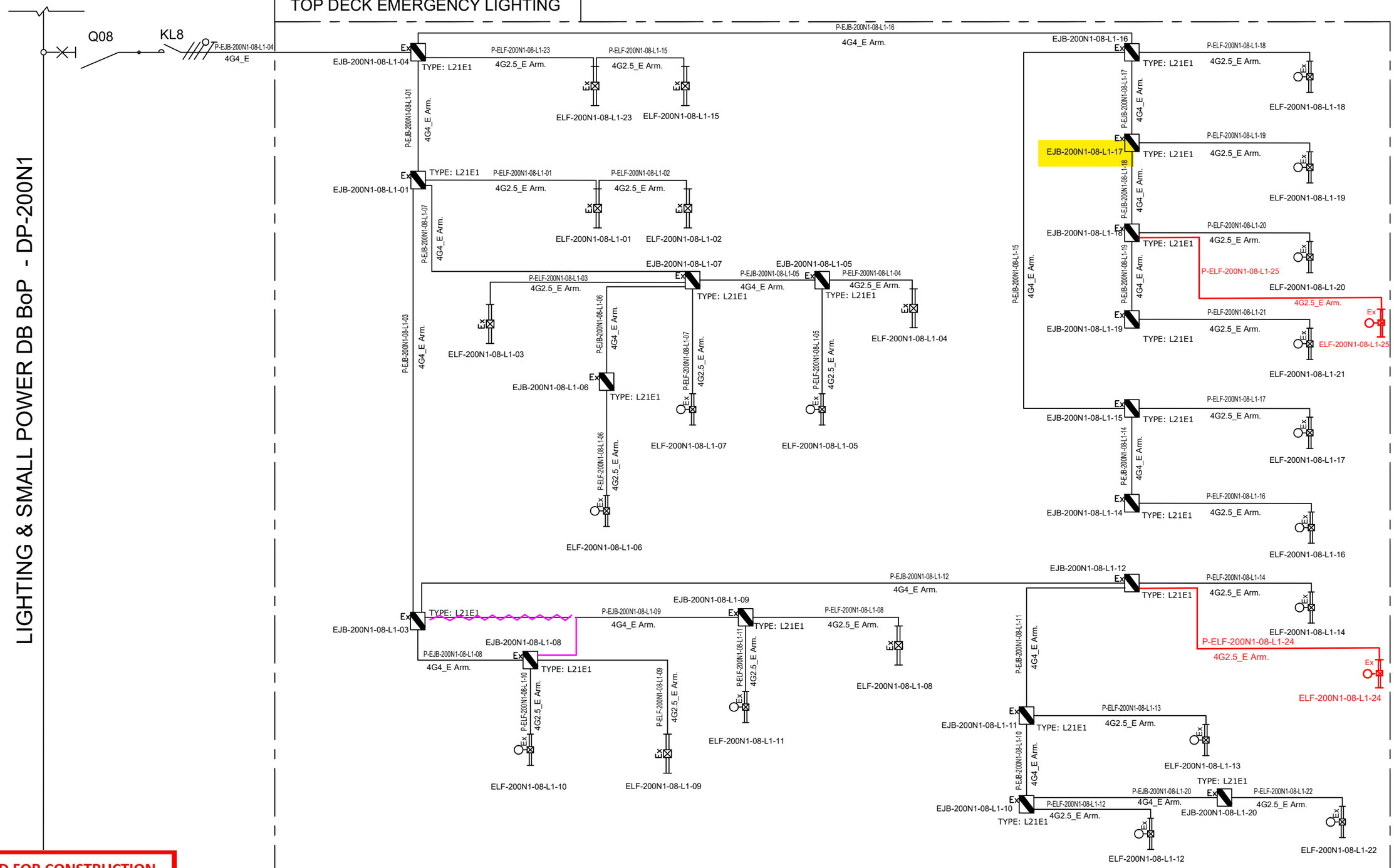
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

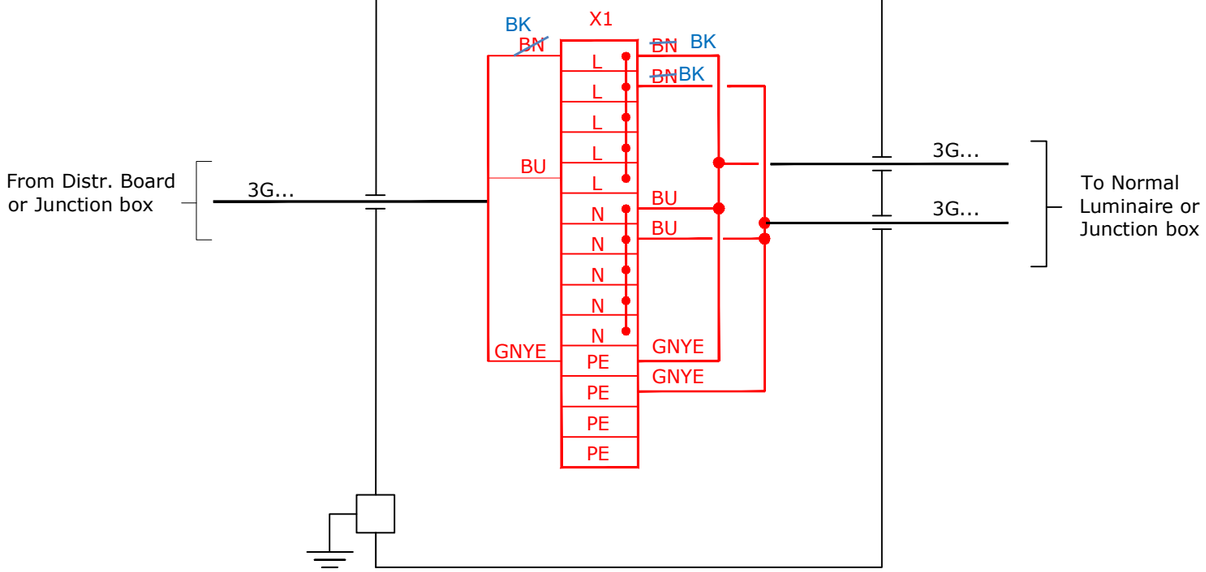
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

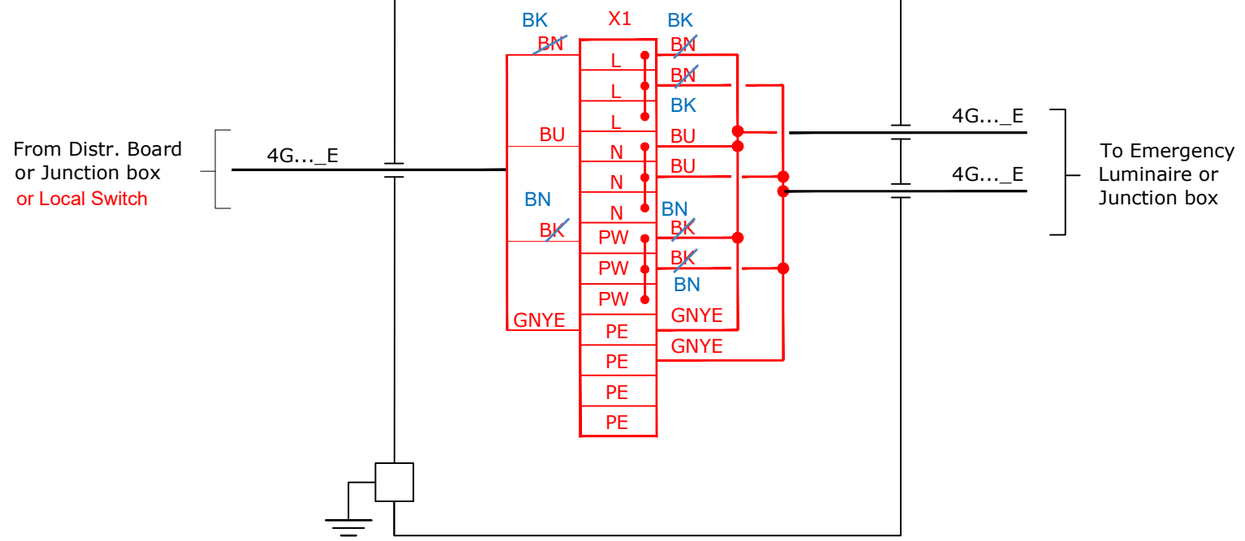
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

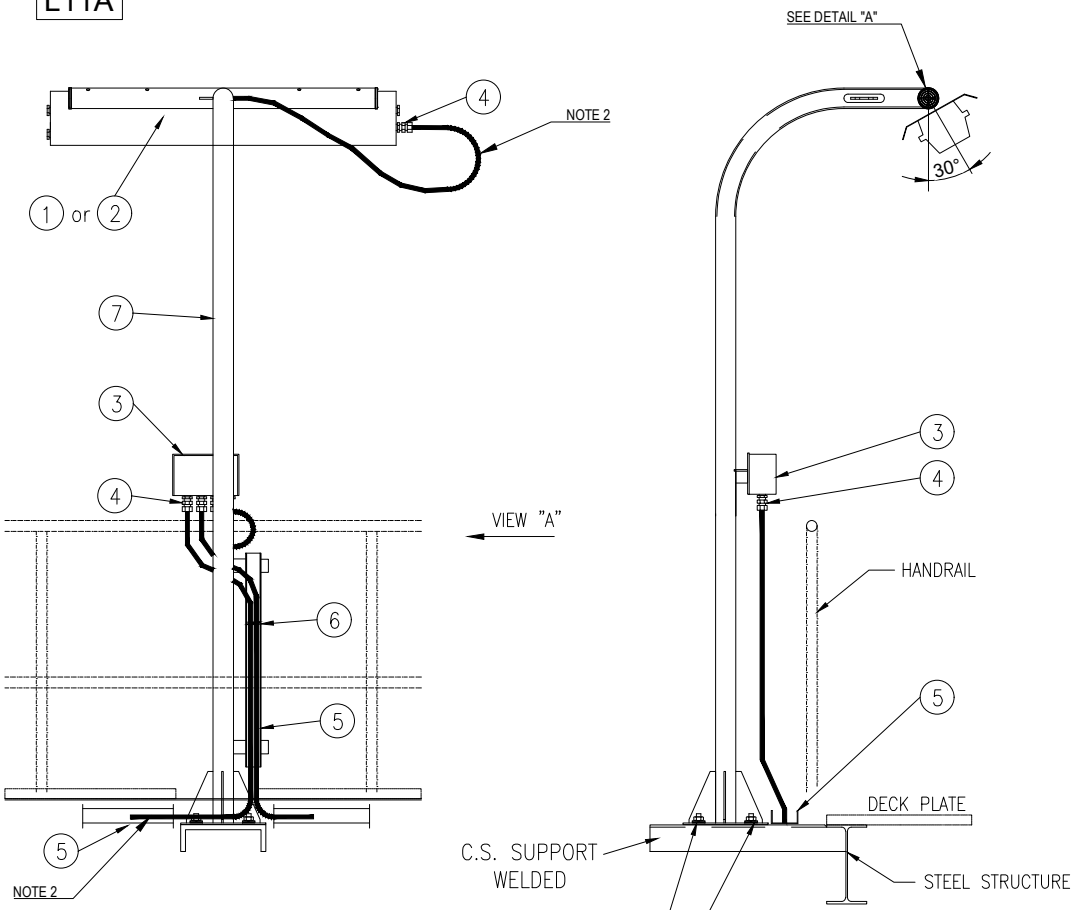
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

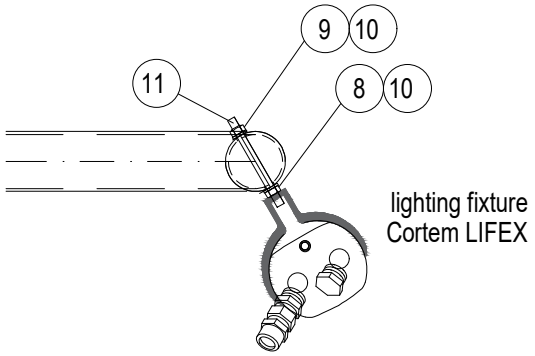
File Name : 123A90-DDL-EL-DG-20125

L11A



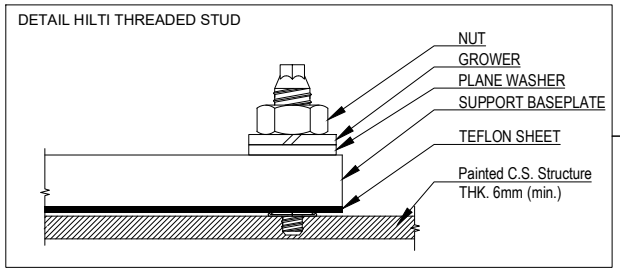
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

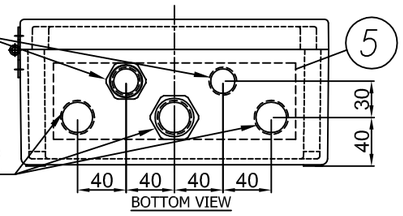
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

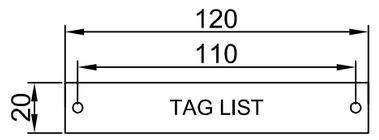
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

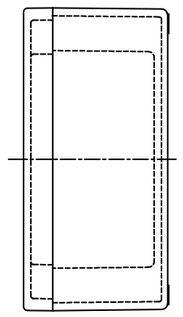
A002MAX

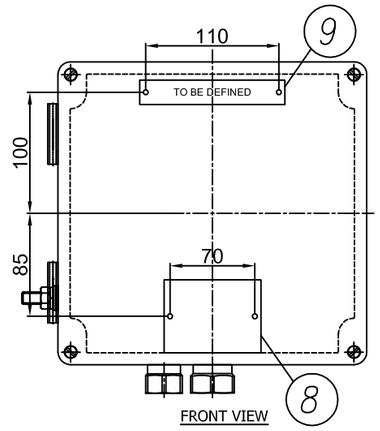
(9) PLATE DETAIL



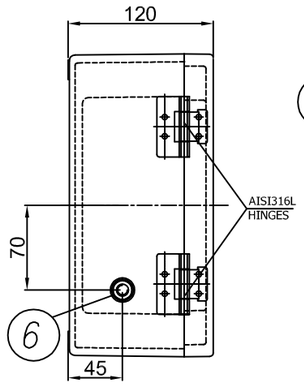
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

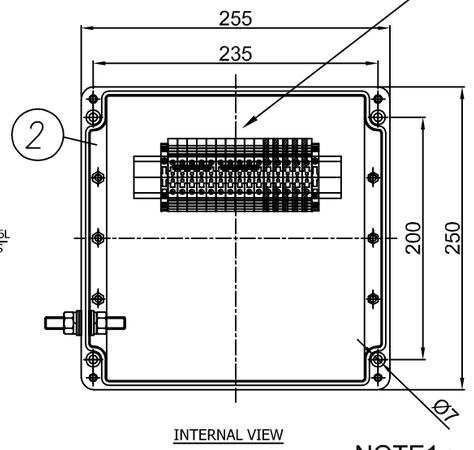

RIGHT VIEW



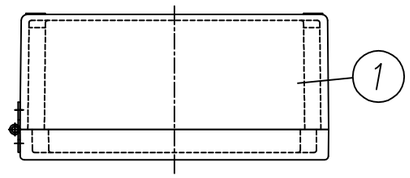
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

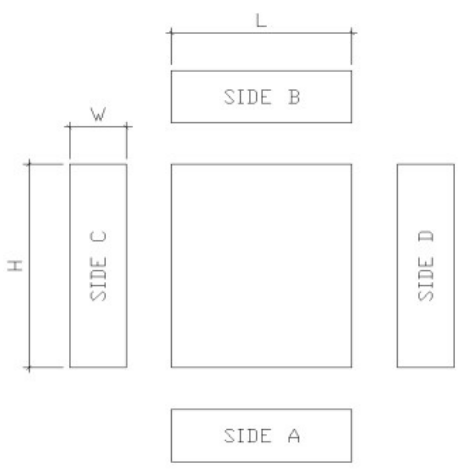
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

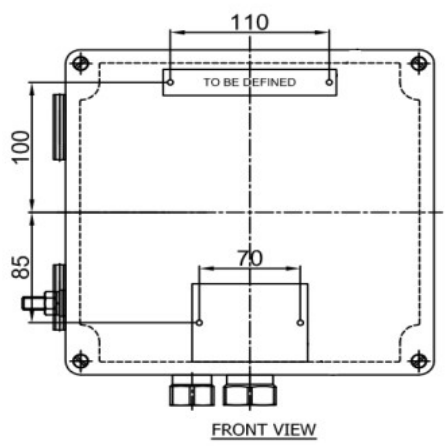
File Name : 1724001481-EL-DA-00003 Rev. 01

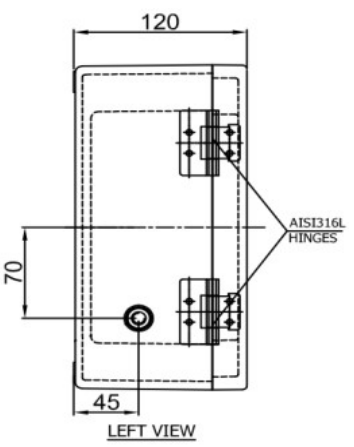
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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ROSETTI MARINO

CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-18	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001649		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX31 Junction and Marshalling Box

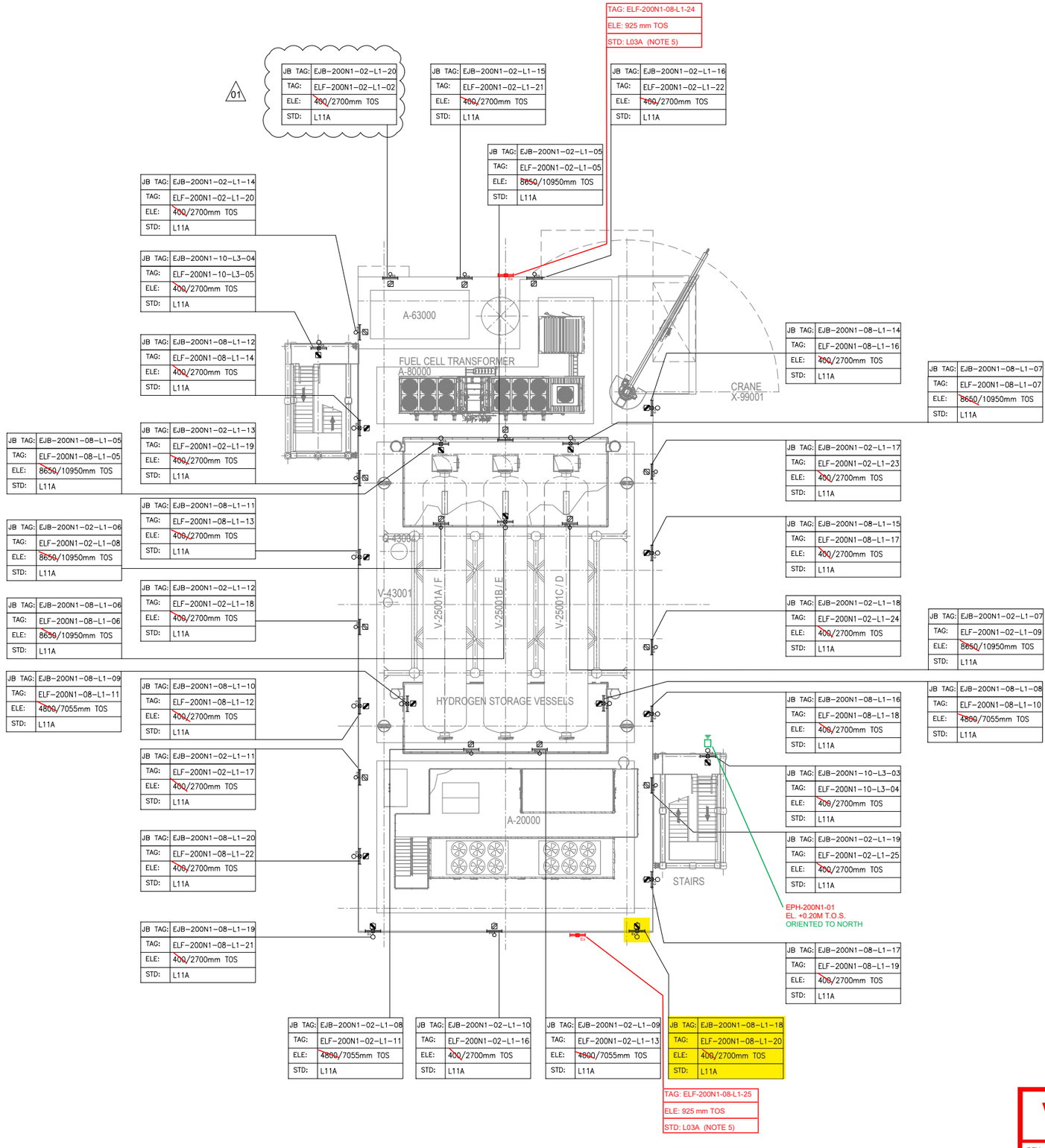
1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	OK
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK
7	Check all bolts are fitted and correcly tighted .	OK
8	Check all unused entries are suitably plugged.	PL
9	Check earthing and bonding against drawings.	OK
10	Check terminal blocks segregation barriers are fitted where necessary.	NA
11	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

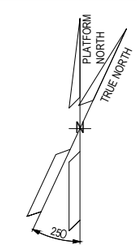
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Luca Mussi	
Date	2025-01-13	2025-01-21	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:02:28.334Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-21T15:49:35.045Z	

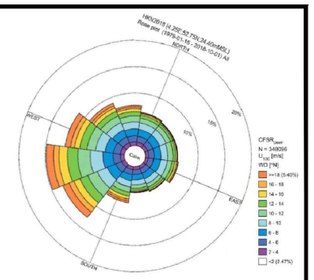
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

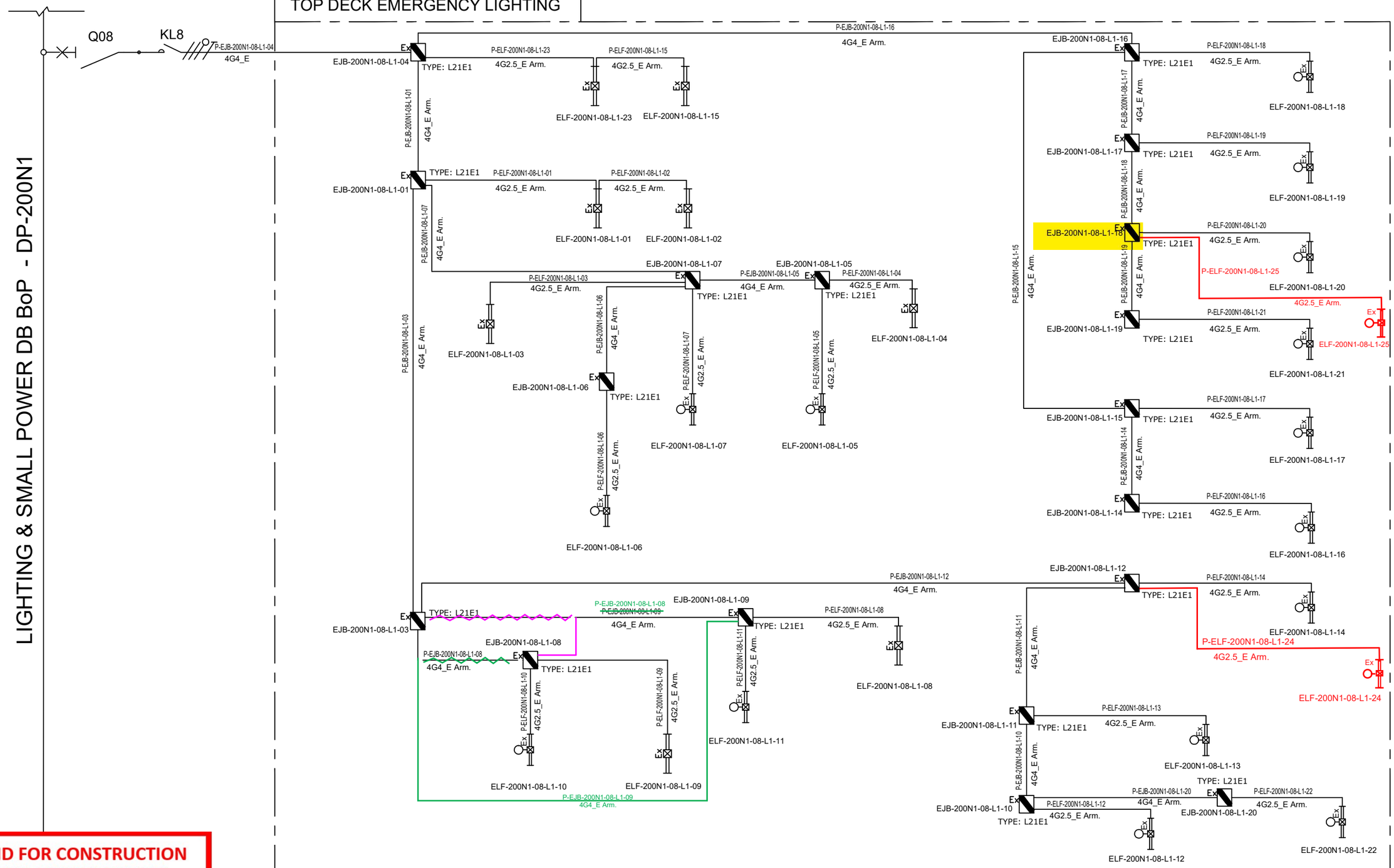
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150	
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

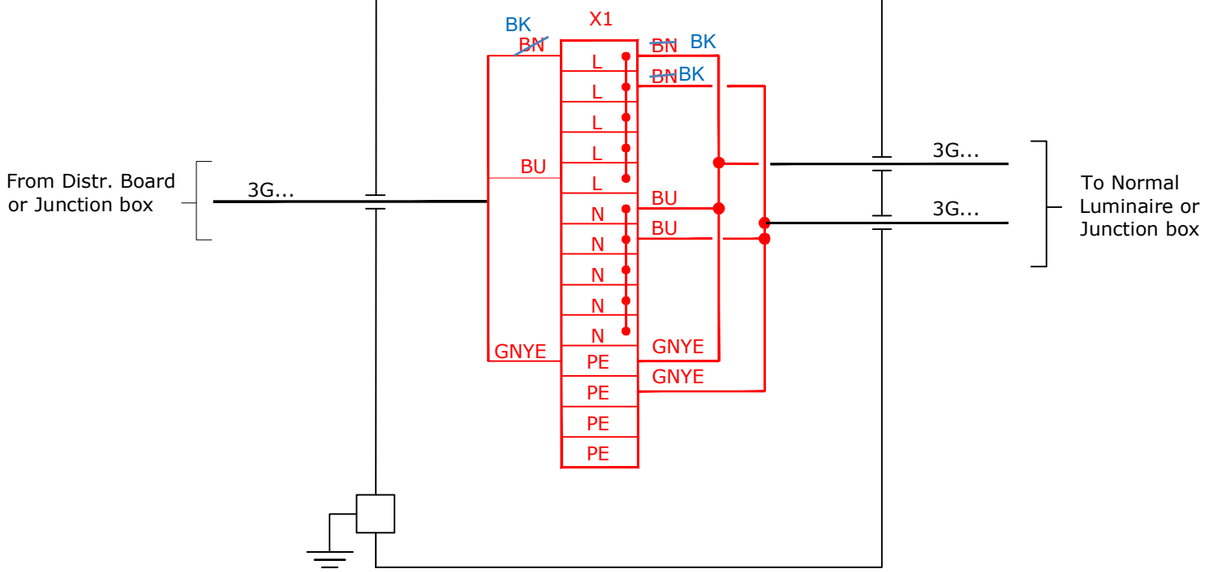
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

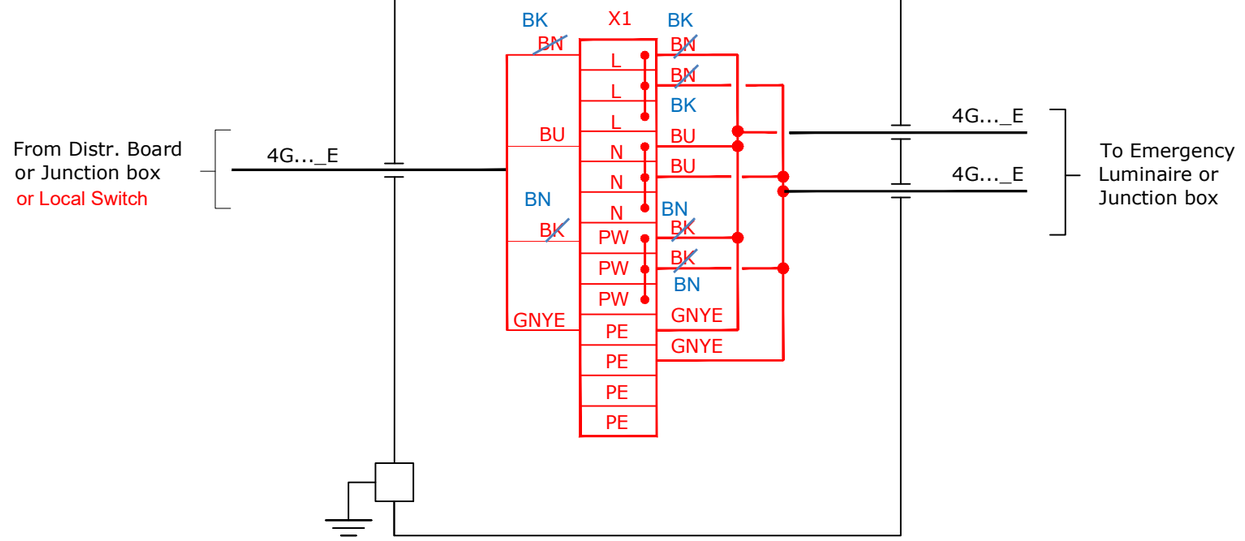
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

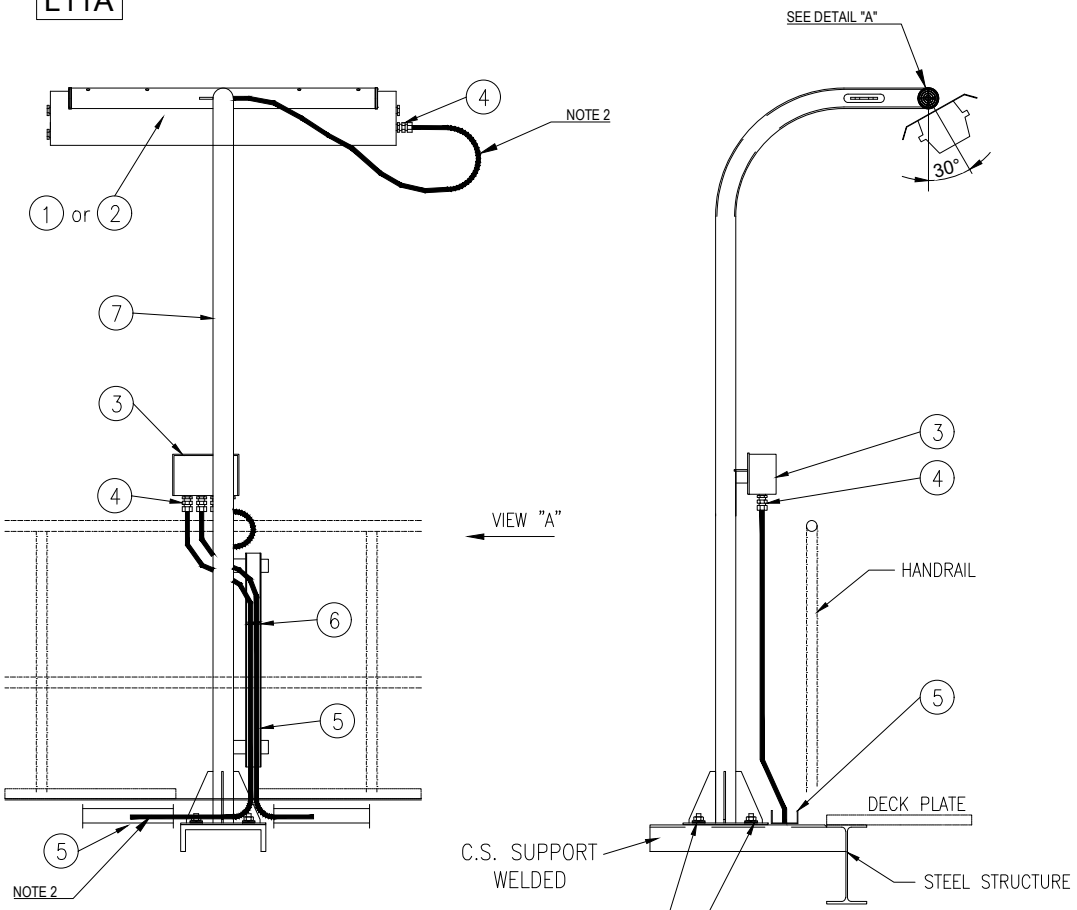
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

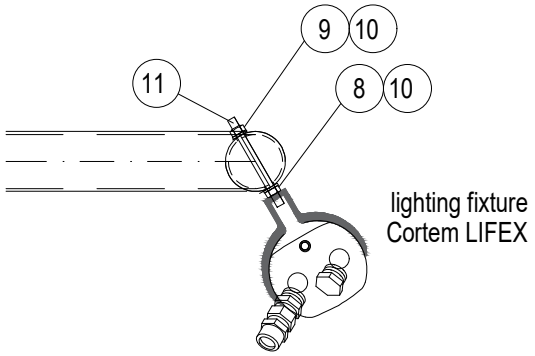
File Name : 123A90-DDL-EL-DG-20125

L11A



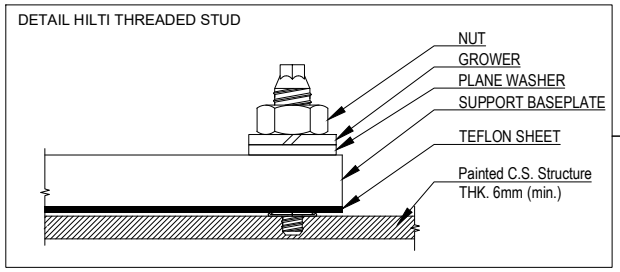
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

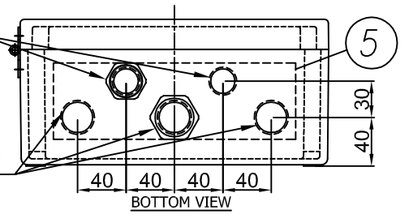
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

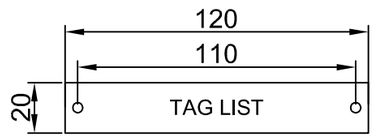
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

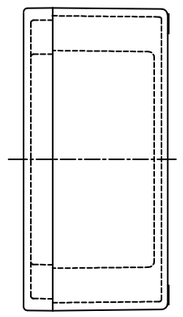
A002MAX

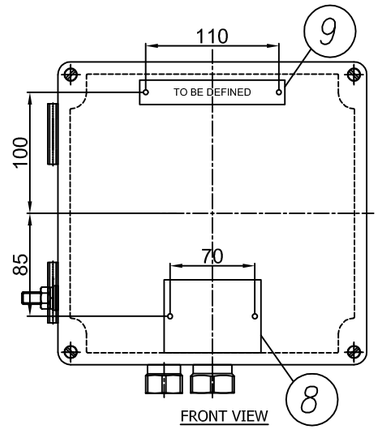
(9) PLATE DETAIL



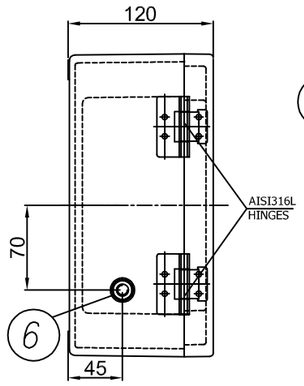
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

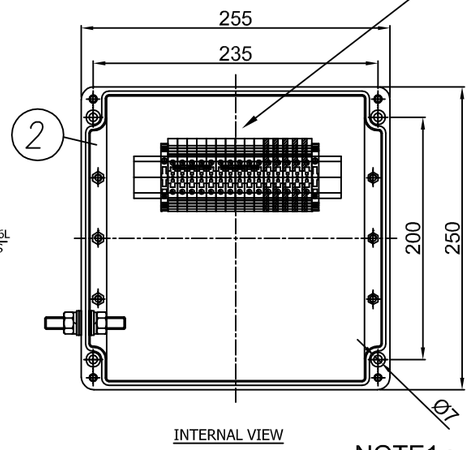

RIGHT VIEW



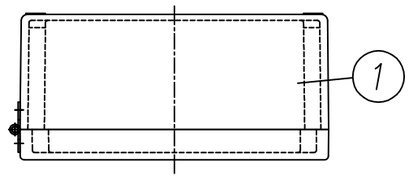
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

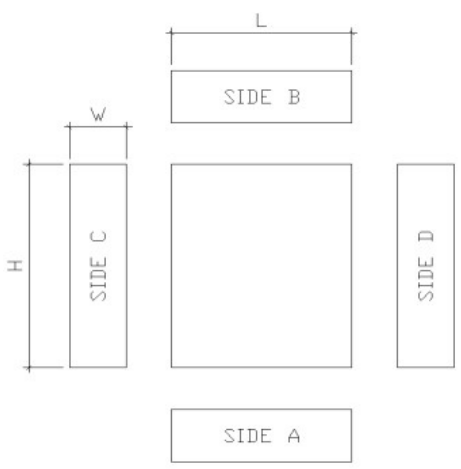
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

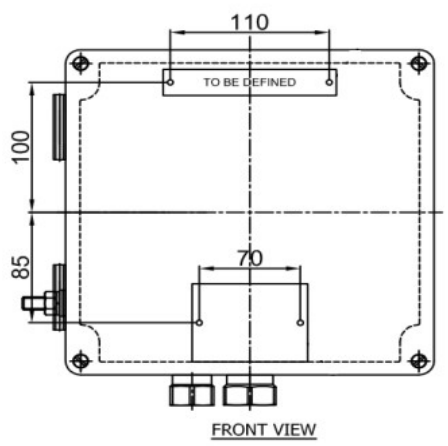
File Name : 1724001481-EL-DA-00003 Rev. 01

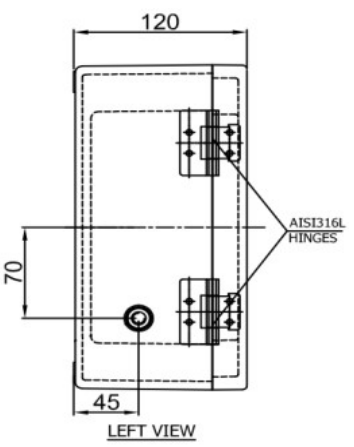
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-19	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001650		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX31 Junction and Marshalling Box

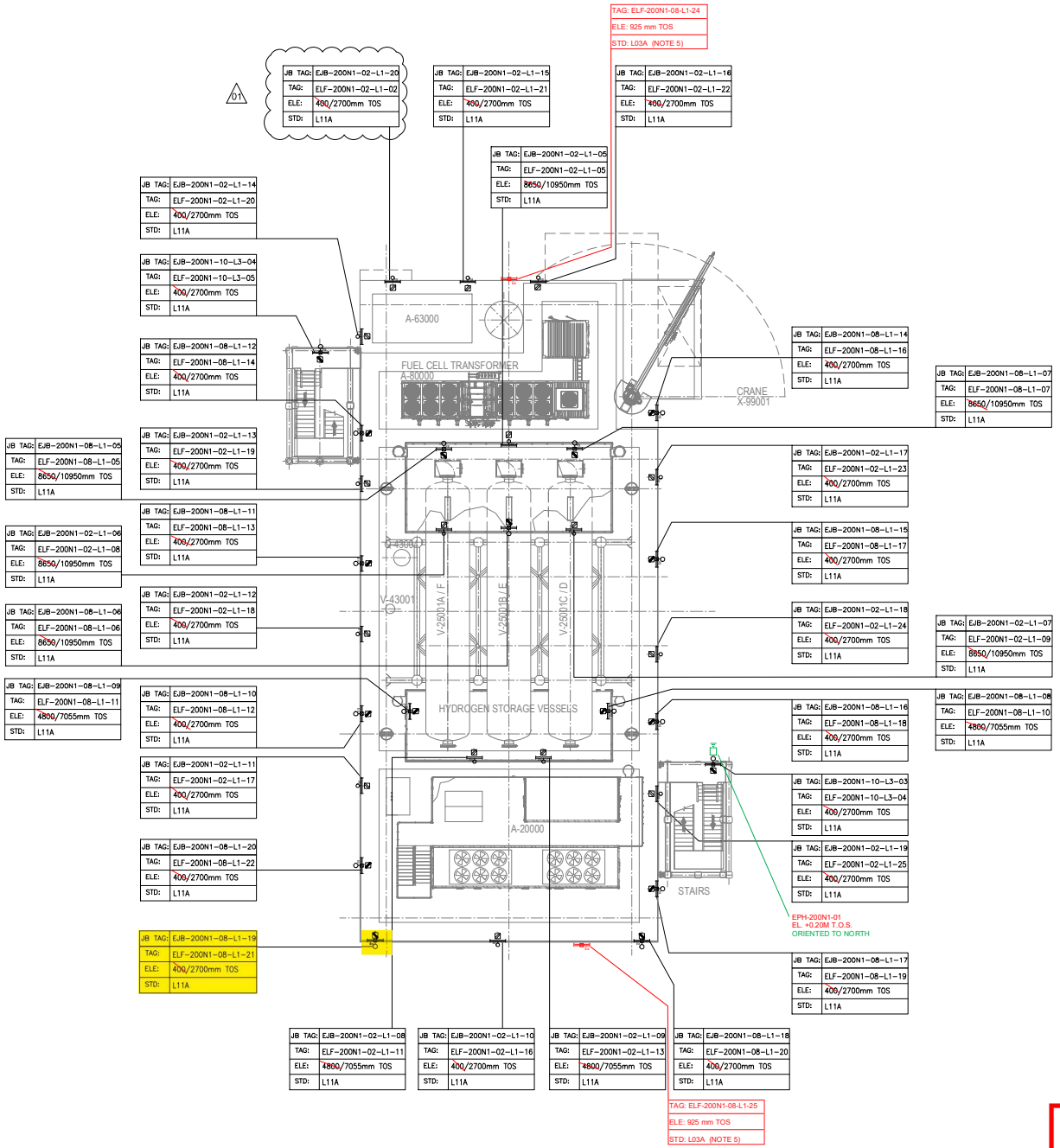
1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	PL
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK
7	Check all bolts are fitted and correcly tighted .	OK
8	Check all unused entries are suitably plugged.	OK
9	Check earthing and bonding against drawings.	OK
10	Check terminal blocks segregation barriers are fitted where necessary.	NA
11	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

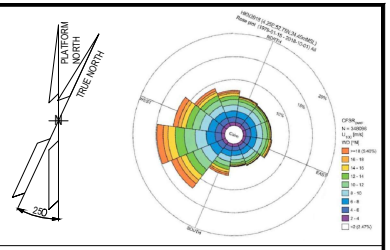
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Gabriele Bertuccelli	
Date	2024-12-09	2025-01-24	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-09T10:46:42.207Z	PROVERLIS Digitaly signed by Gabriele Bertuccelli 2025-01-24T13:04:10.607Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

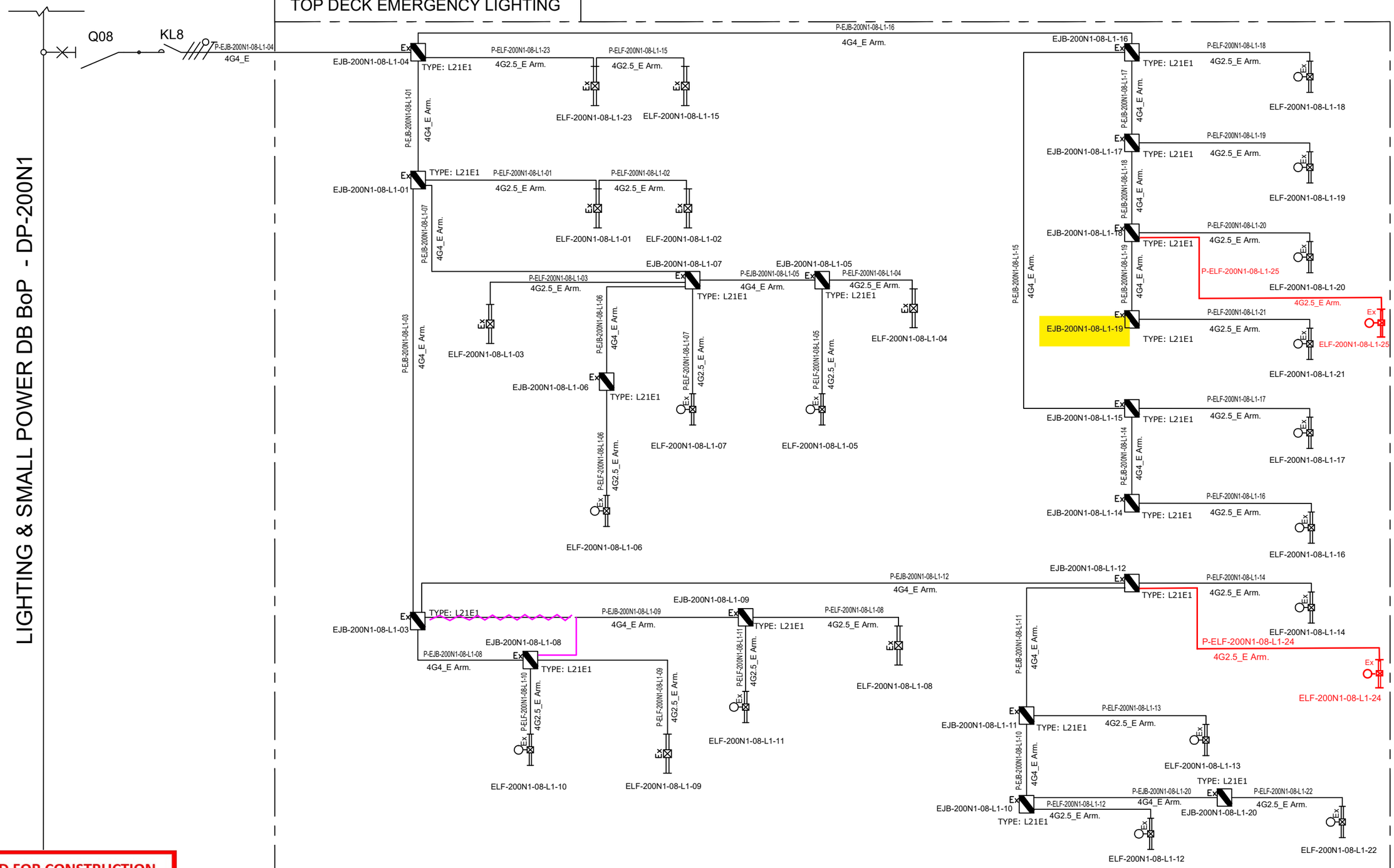
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

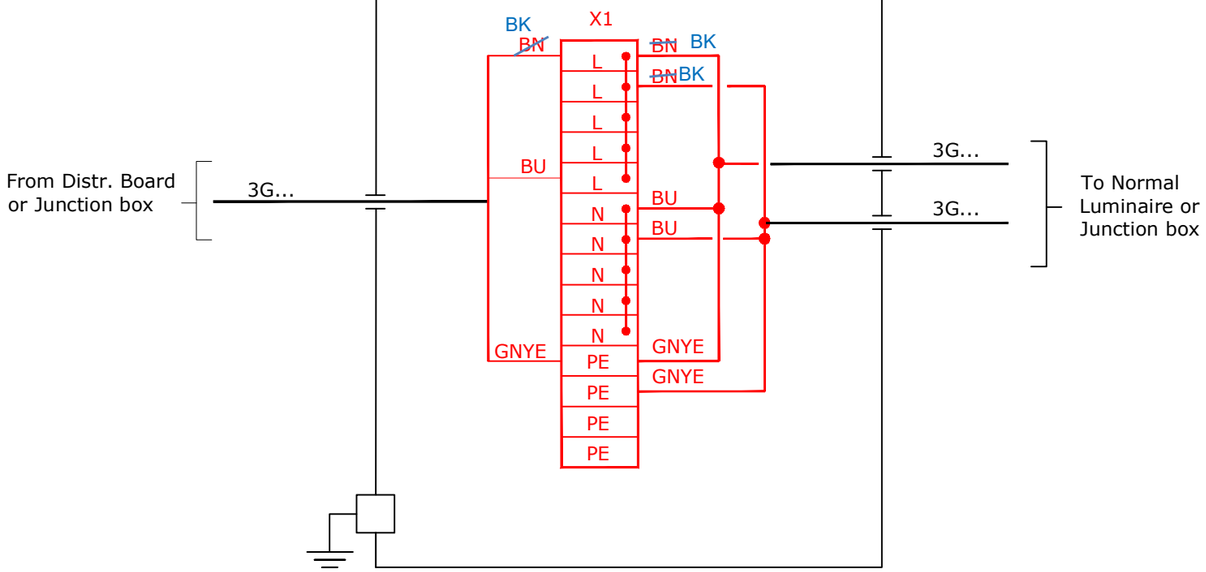
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

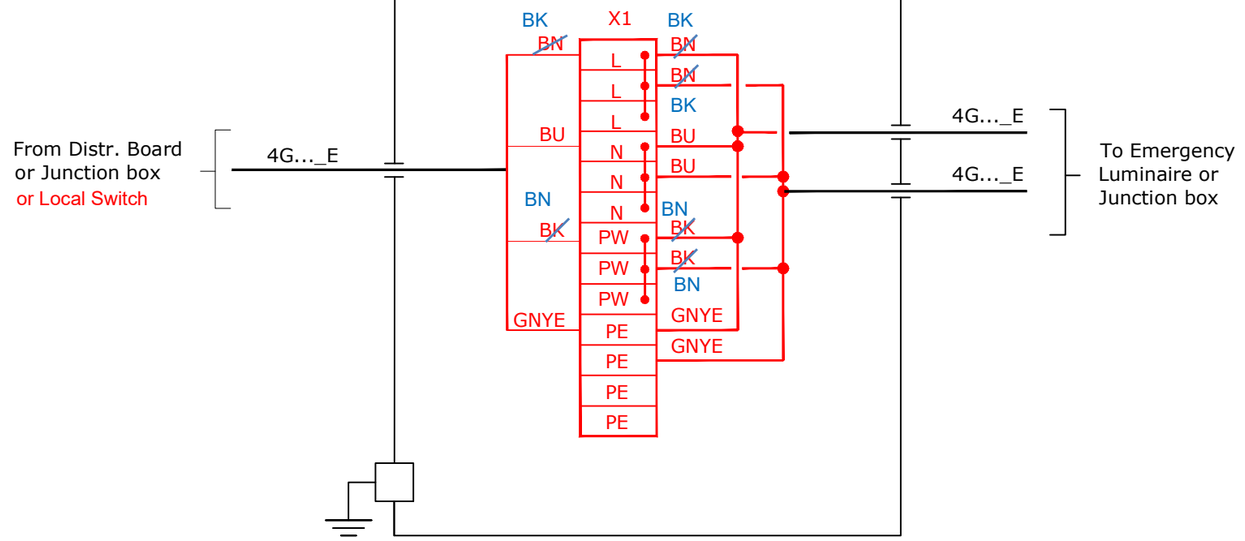
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

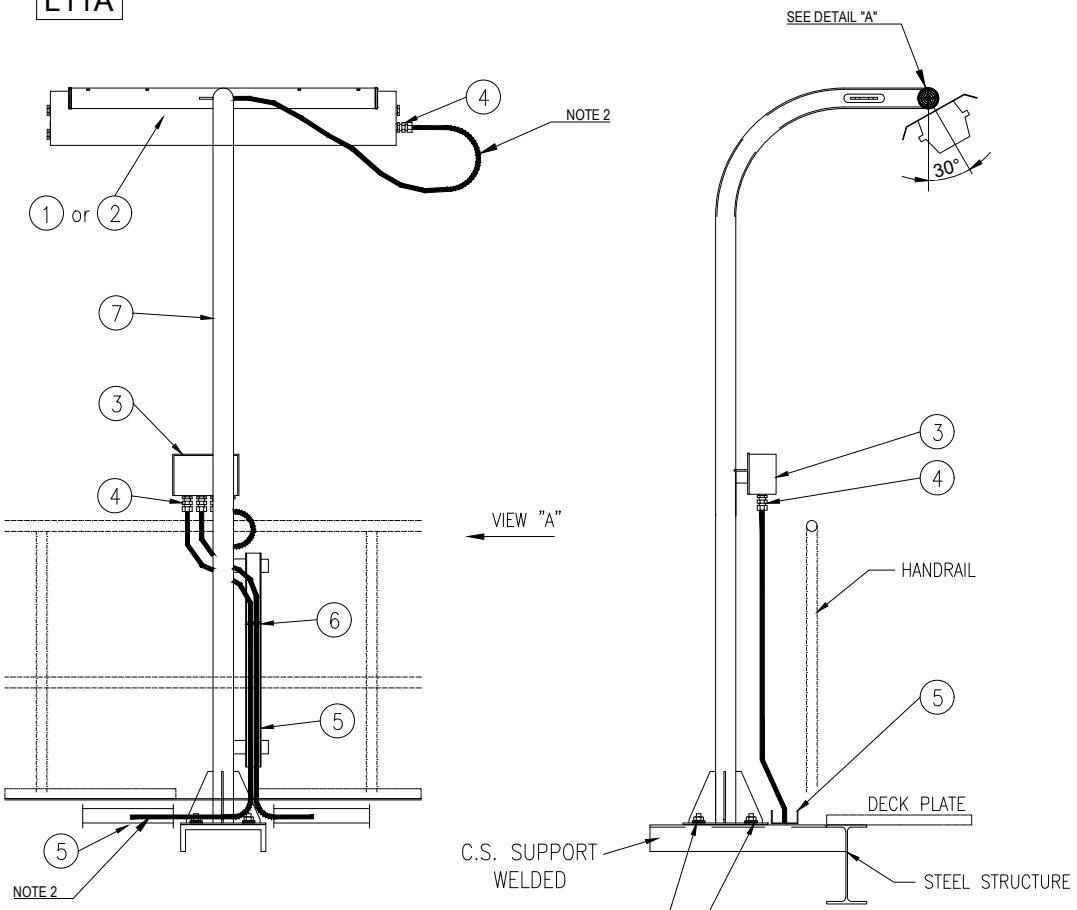
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

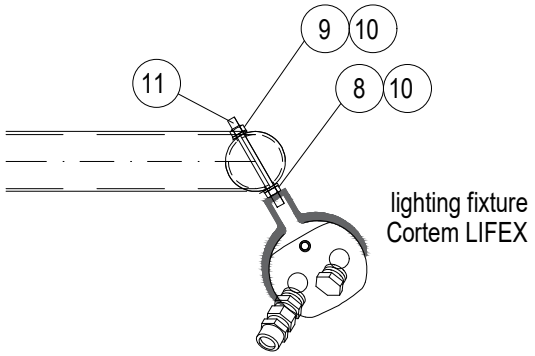
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L11A



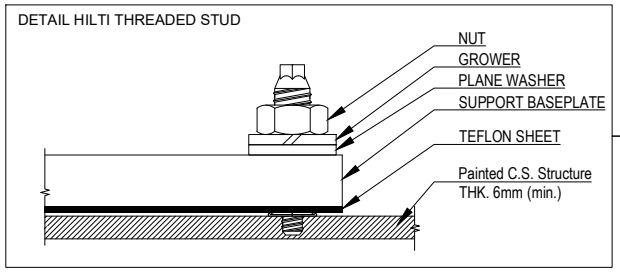
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

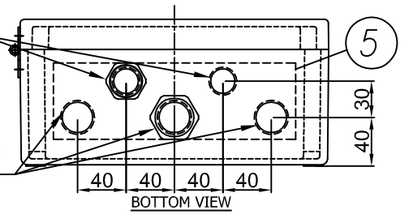
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

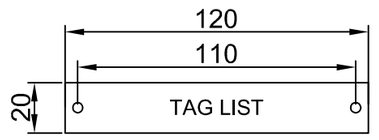
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

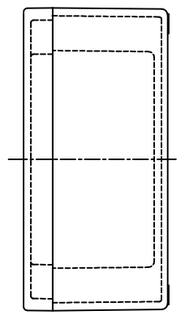
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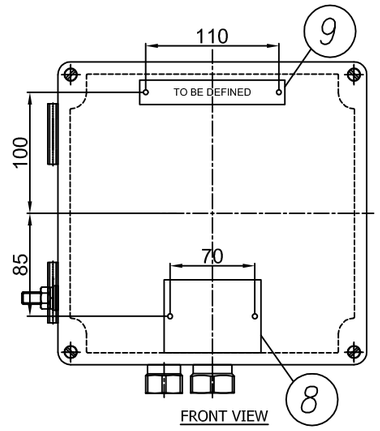
(9) PLATE DETAIL



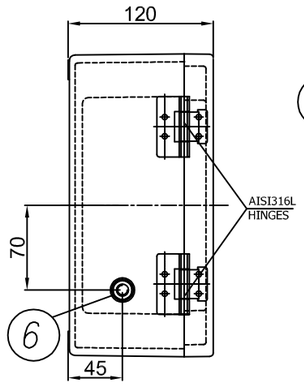
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

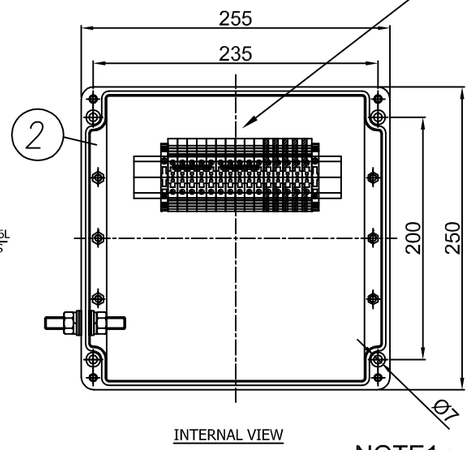

RIGHT VIEW



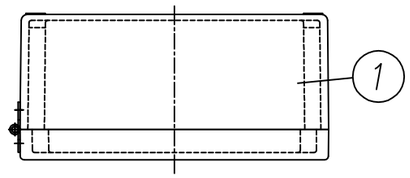
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

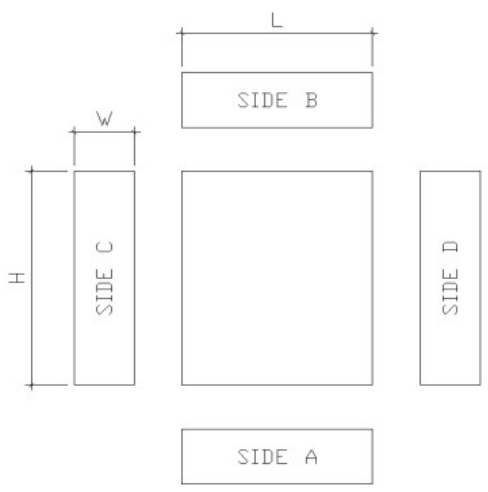
SHEET 005

REV. 05

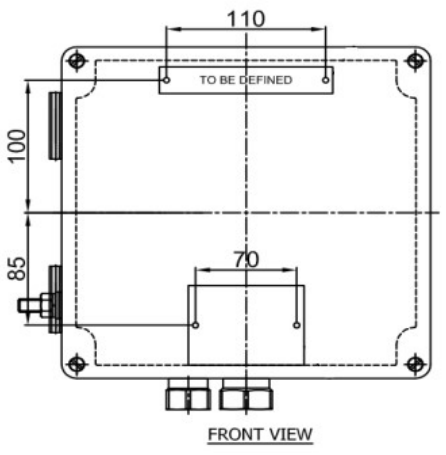
F.to UNI A3: 420mmx297mm

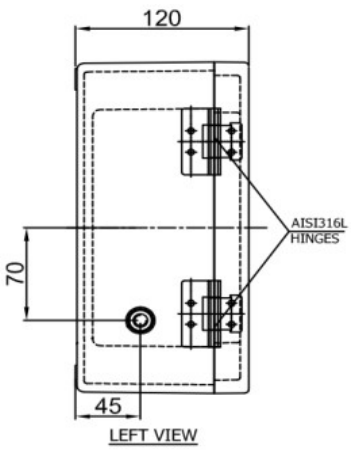
File Name : 1724001481-EL-DA-00003 Rev. 01

Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	40+4(Spare)		(39+5 Spare)	01
6	Application	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Safe area			00
10	Zone 1/Zone 2	NA			00
11	Temp. Class	NA	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		00
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Normal	Ex eb	Will be used ATEX even in safe area	01
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			
45	Thread	NA			
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:
(*) Filled by Vendor





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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-20	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001651		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX31 Junction and Marshalling Box

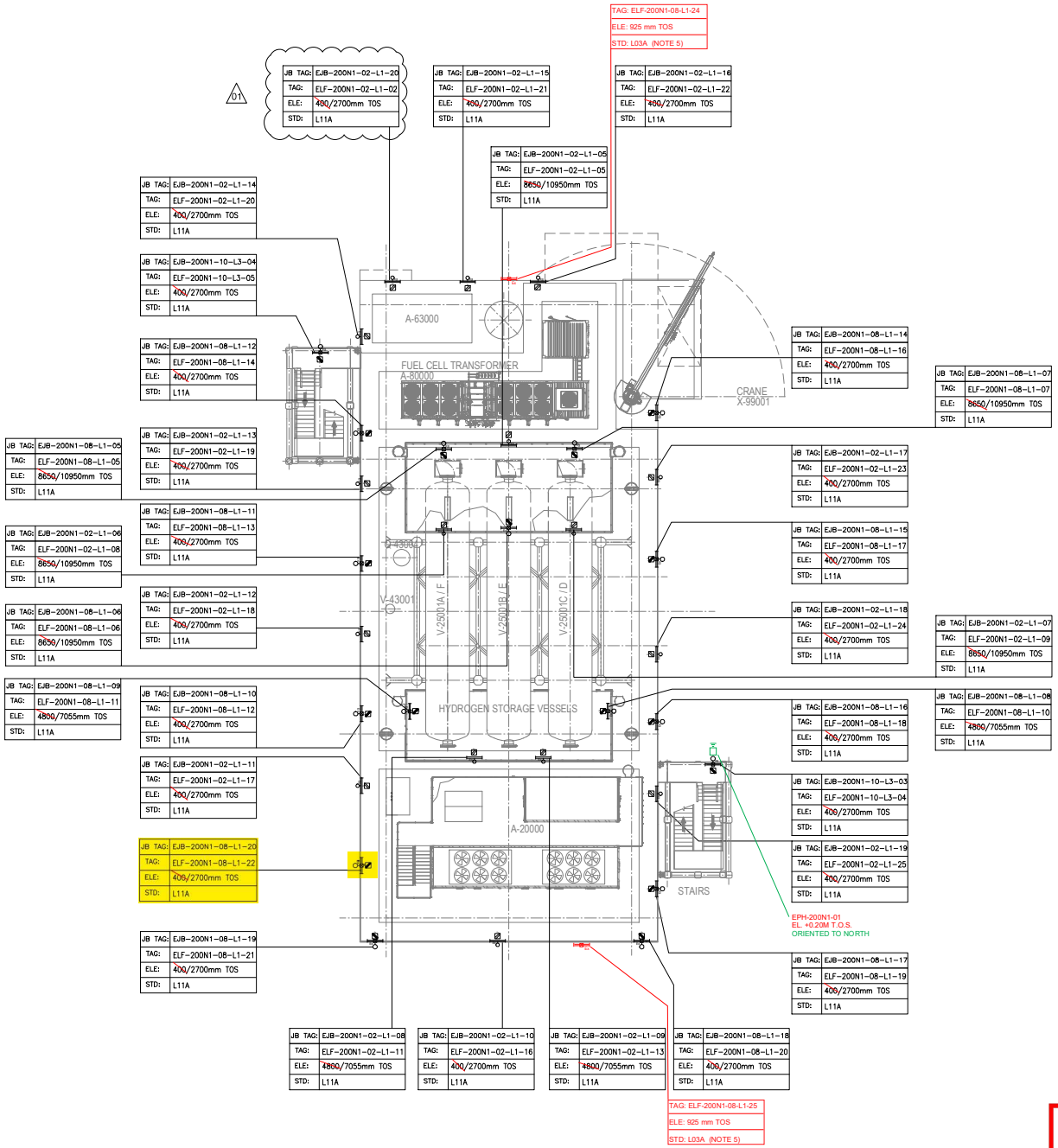
1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	OK
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK
7	Check all bolts are fitted and correcly tighted .	OK
8	Check all unused entries are suitably plugged.	OK
9	Check earthing and bonding against drawings.	OK
10	Check terminal blocks segregation barriers are fitted where necessary.	NA
11	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

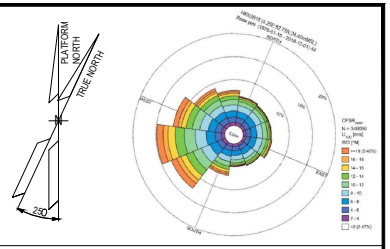
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-09	2025-01-16	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-09T10:49:56.077Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-16T15:13:11.589Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

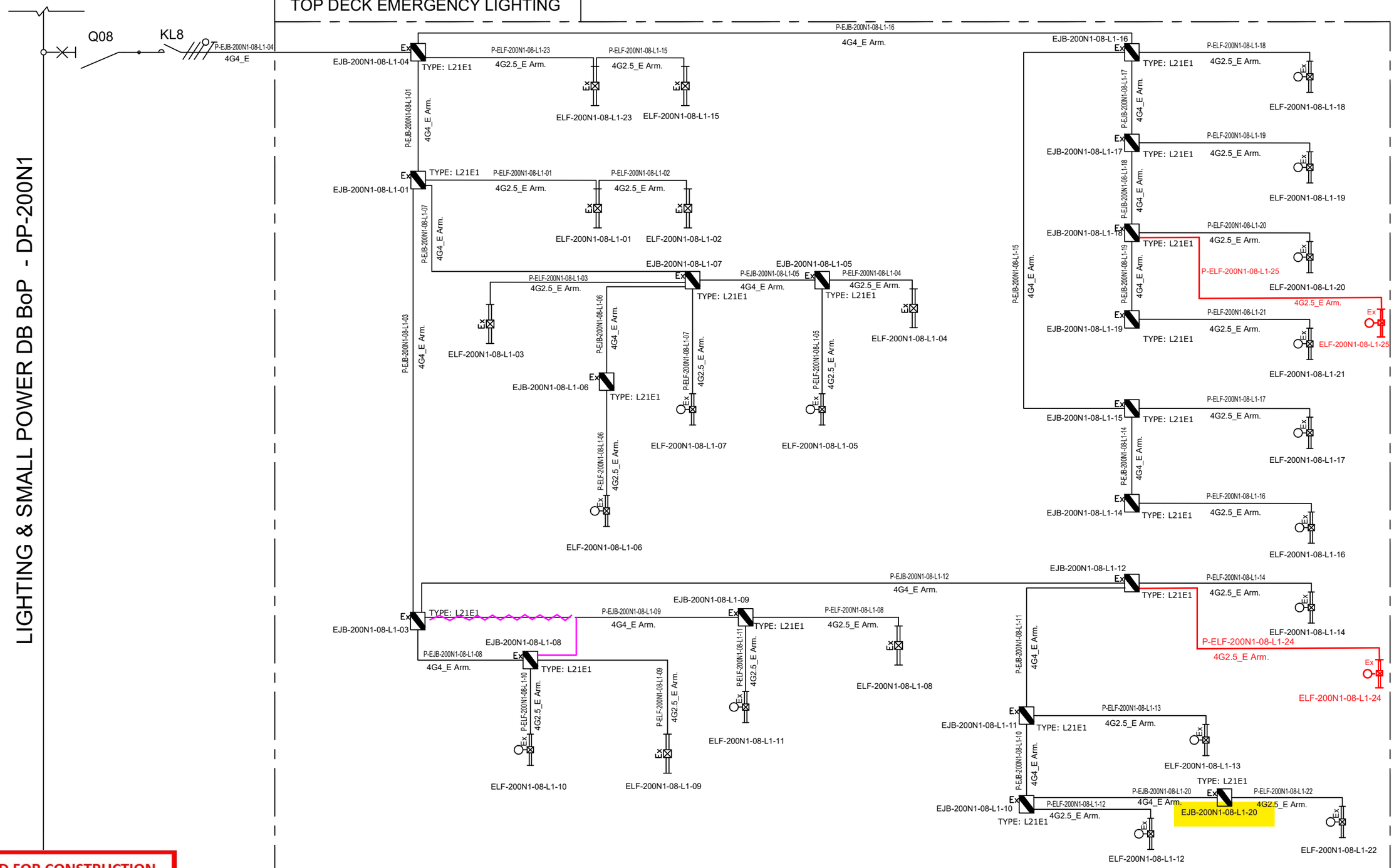
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

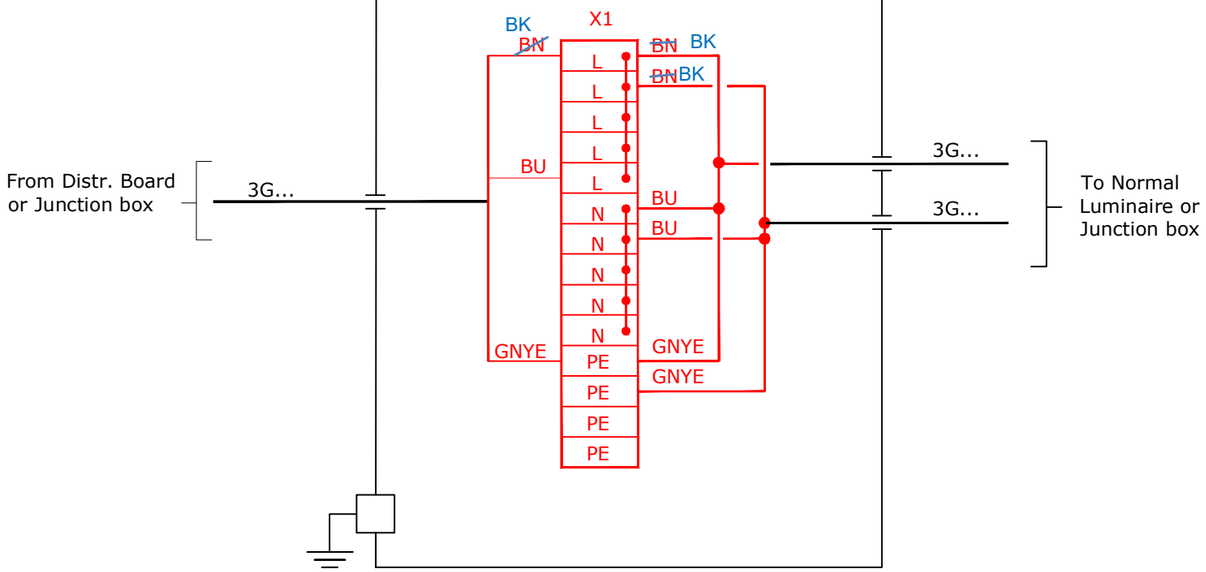
CROSSWIND

ROSETTI MARINO

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

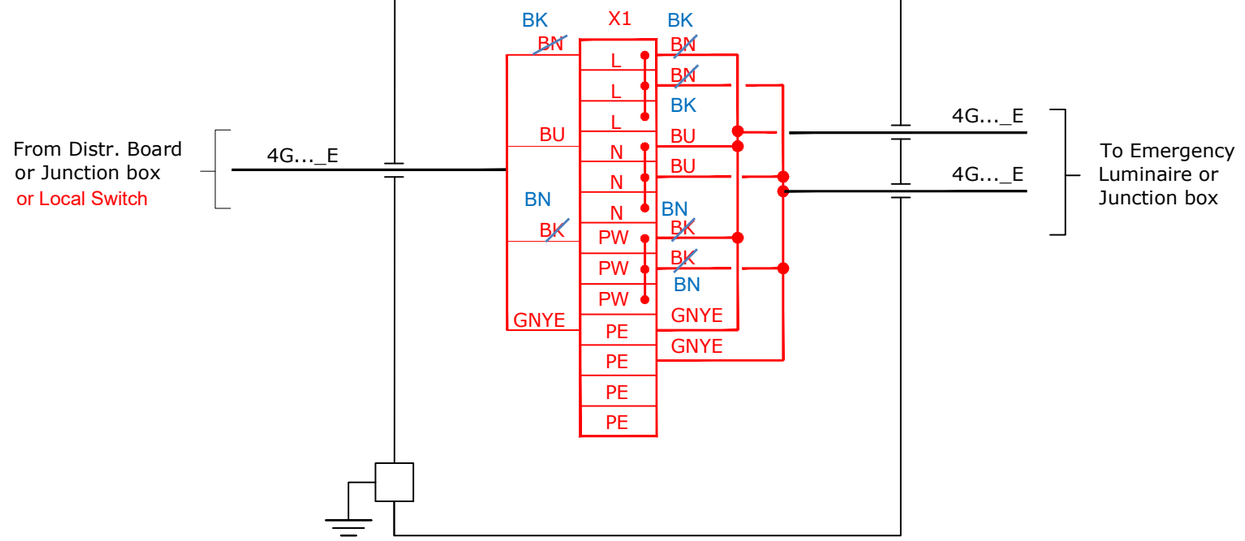
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

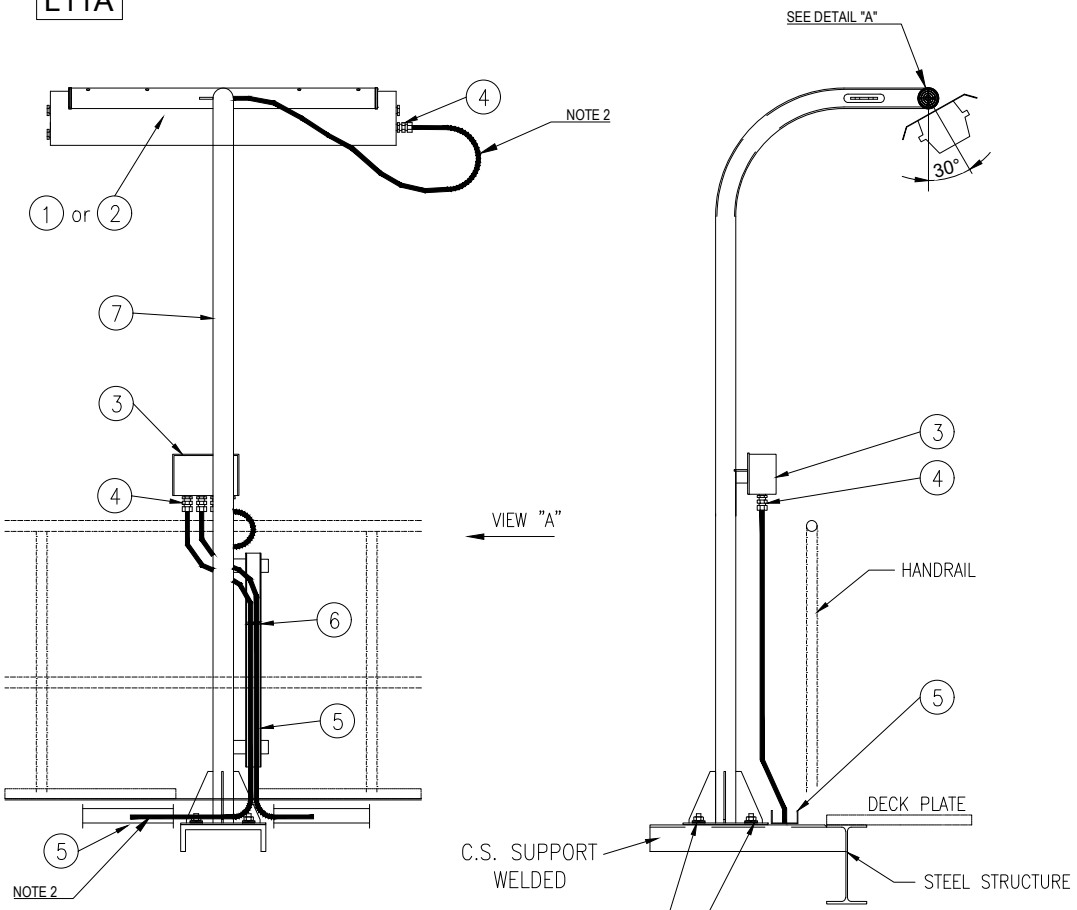
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

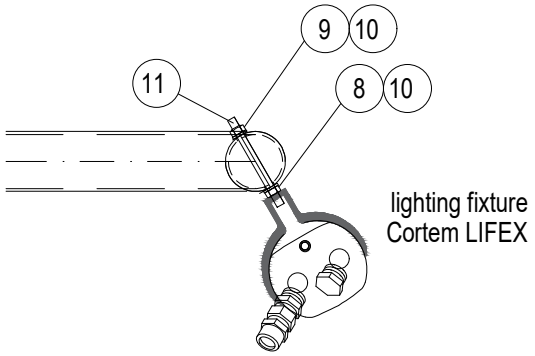
File Name : 123A90-DDL-EL-DG-20125

L11A



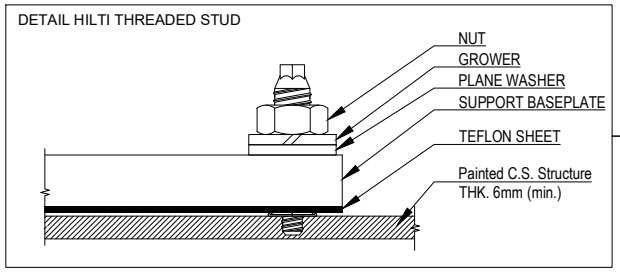
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

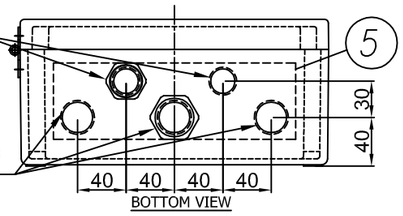
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

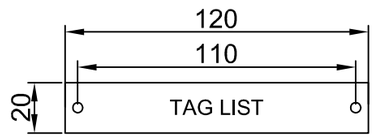
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

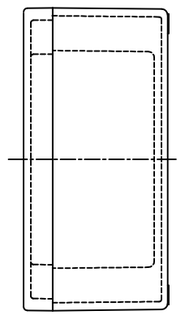
A002MAX

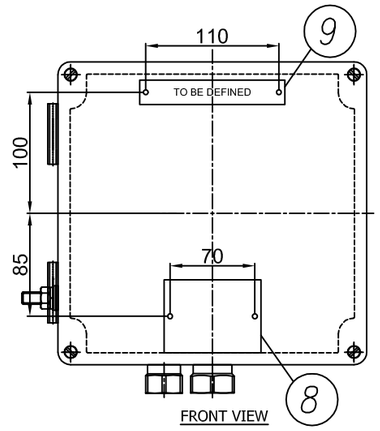
(9) PLATE DETAIL



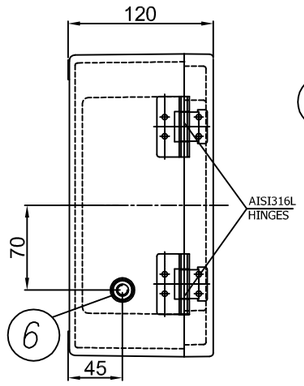
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

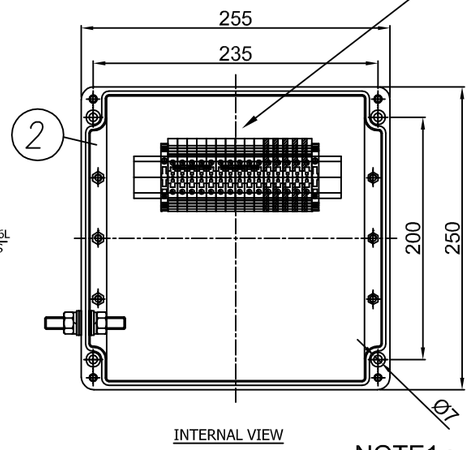

RIGHT VIEW



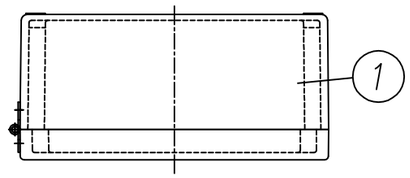
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

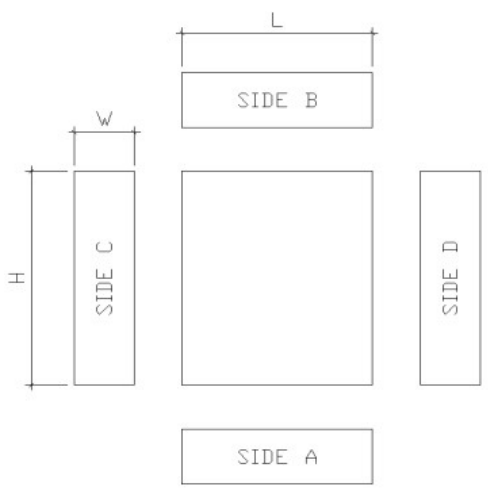
SHEET 005

REV. 05

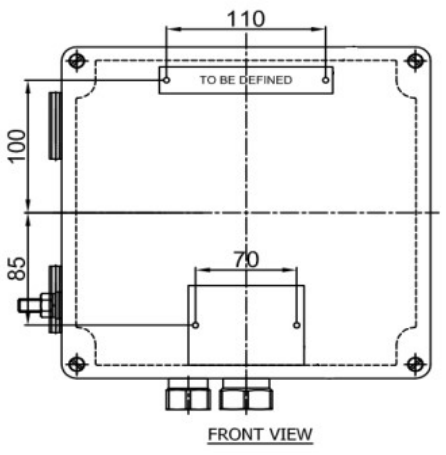
F.to UNI A3: 420mmx297mm

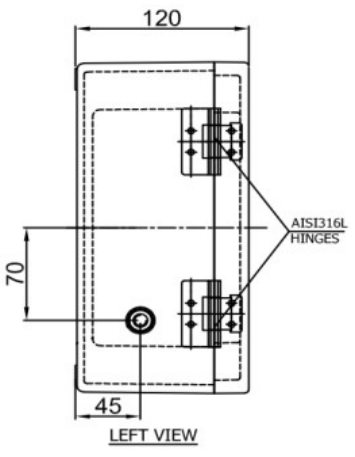
File Name : 1724001481-EL-DA-00003 Rev. 01

Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	40+4(Spare)		(39+5 Spare)	01
6	Application	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Safe area			00
10	Zone 1/Zone 2	NA			00
11	Temp. Class	NA	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		00
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Normal	Ex eb	Will be used ATEX even in safe area	01
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			
45	Thread	NA			
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:
(*) Filled by Vendor





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ITEM	Tag	ELF-200N1-08-L1-19	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001693		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 Miscellaneous Electrical Equipment

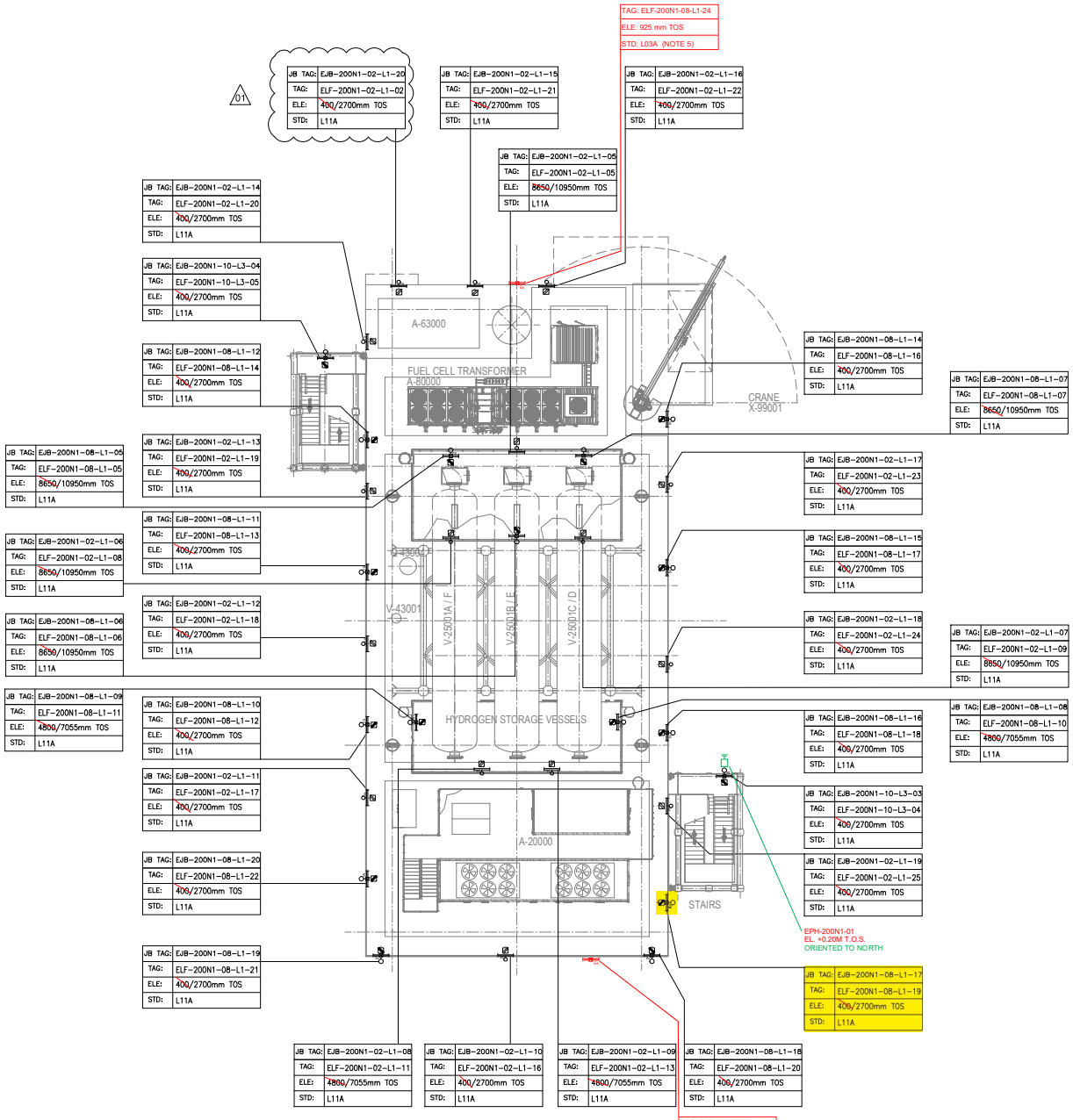
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	PL
4	Check nameplate data is correct.	NA
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	PL
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

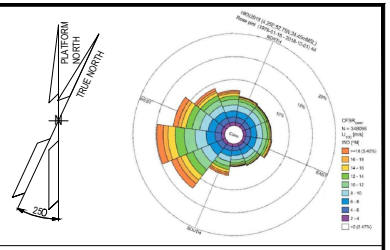
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-07	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-07T08:04:04.185Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-02T15:56:47.803Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1

- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. — ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. — ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. — EJB-200N1-08-L1-01 — TYPE: L21E1
  - P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. — ELF-200N1-08-L1-01
  - P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. — ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm. — EJB-200N1-08-L1-07 — TYPE: L21E1
  - P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. — ELF-200N1-08-L1-03
  - P-EJB-200N1-08-L1-06 — 4G4_E Arm. — EJB-200N1-08-L1-06 — TYPE: L21E1
    - P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. — ELF-200N1-08-L1-07
    - P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. — ELF-200N1-08-L1-06
  - P-EJB-200N1-08-L1-05 — 4G4_E Arm. — EJB-200N1-08-L1-05 — TYPE: L21E1
    - P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. — ELF-200N1-08-L1-05
    - P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. — ELF-200N1-08-L1-04

P-EJB-200N1-08-L1-16 — 4G4_E Arm. — EJB-200N1-08-L1-16 — TYPE: L21E1

- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. — ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm. — EJB-200N1-08-L1-17 — TYPE: L21E1
  - P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. — ELF-200N1-08-L1-19
  - P-EJB-200N1-08-L1-18 — 4G4_E Arm. — EJB-200N1-08-L1-18 — TYPE: L21E1
    - P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. — ELF-200N1-08-L1-20
    - P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. — ELF-200N1-08-L1-25
    - P-EJB-200N1-08-L1-19 — 4G4_E Arm. — EJB-200N1-08-L1-19 — TYPE: L21E1
      - P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. — ELF-200N1-08-L1-21
      - P-EJB-200N1-08-L1-15 — 4G4_E Arm. — EJB-200N1-08-L1-15 — TYPE: L21E1
        - P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. — ELF-200N1-08-L1-17
        - P-EJB-200N1-08-L1-14 — 4G4_E Arm. — EJB-200N1-08-L1-14 — TYPE: L21E1
          - P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. — ELF-200N1-08-L1-16
          - P-EJB-200N1-08-L1-12 — 4G4_E Arm. — EJB-200N1-08-L1-12 — TYPE: L21E1
            - P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. — ELF-200N1-08-L1-14
            - P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. — ELF-200N1-08-L1-24
            - P-EJB-200N1-08-L1-11 — 4G4_E Arm. — EJB-200N1-08-L1-11 — TYPE: L21E1
              - P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. — ELF-200N1-08-L1-13
              - P-EJB-200N1-08-L1-10 — 4G4_E Arm. — EJB-200N1-08-L1-10 — TYPE: L21E1
                - P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. — ELF-200N1-08-L1-12
                - P-EJB-200N1-08-L1-20 — 4G4_E Arm. — EJB-200N1-08-L1-20 — TYPE: L21E1
                  - P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. — ELF-200N1-08-L1-22

EJB-200N1-08-L1-03 — TYPE: L21E1

- P-EJB-200N1-08-L1-09 — 4G4_E Arm. — EJB-200N1-08-L1-09
  - P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. — ELF-200N1-08-L1-08
  - P-EJB-200N1-08-L1-08 — 4G4_E Arm. — EJB-200N1-08-L1-08 — TYPE: L21E1
    - P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. — ELF-200N1-08-L1-10
    - P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. — ELF-200N1-08-L1-09
  - P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. — ELF-200N1-08-L1-11

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DG-20125 | SHEET 011 | REV. 01

F.to UNI A3: 420mmx297mm

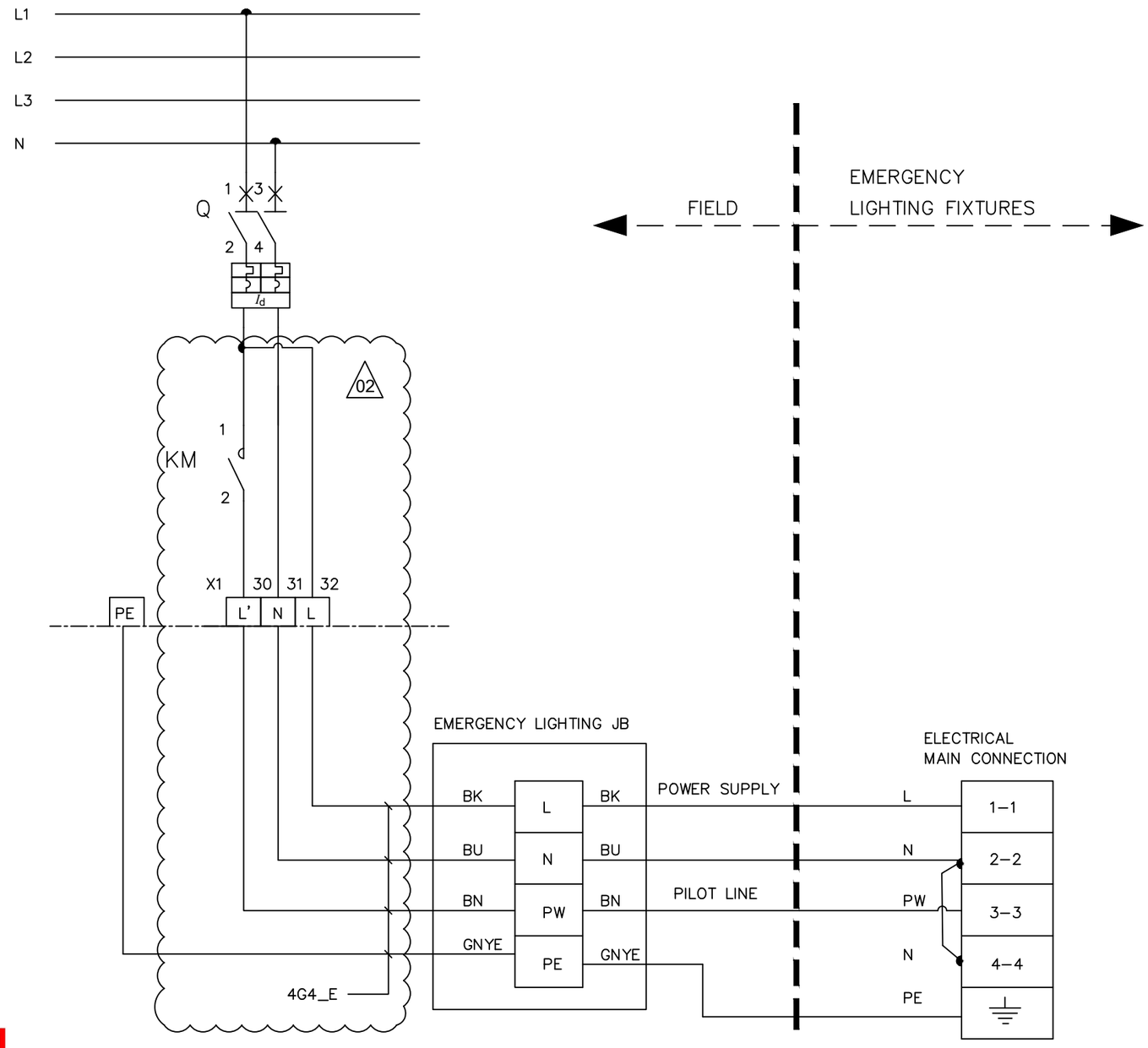
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

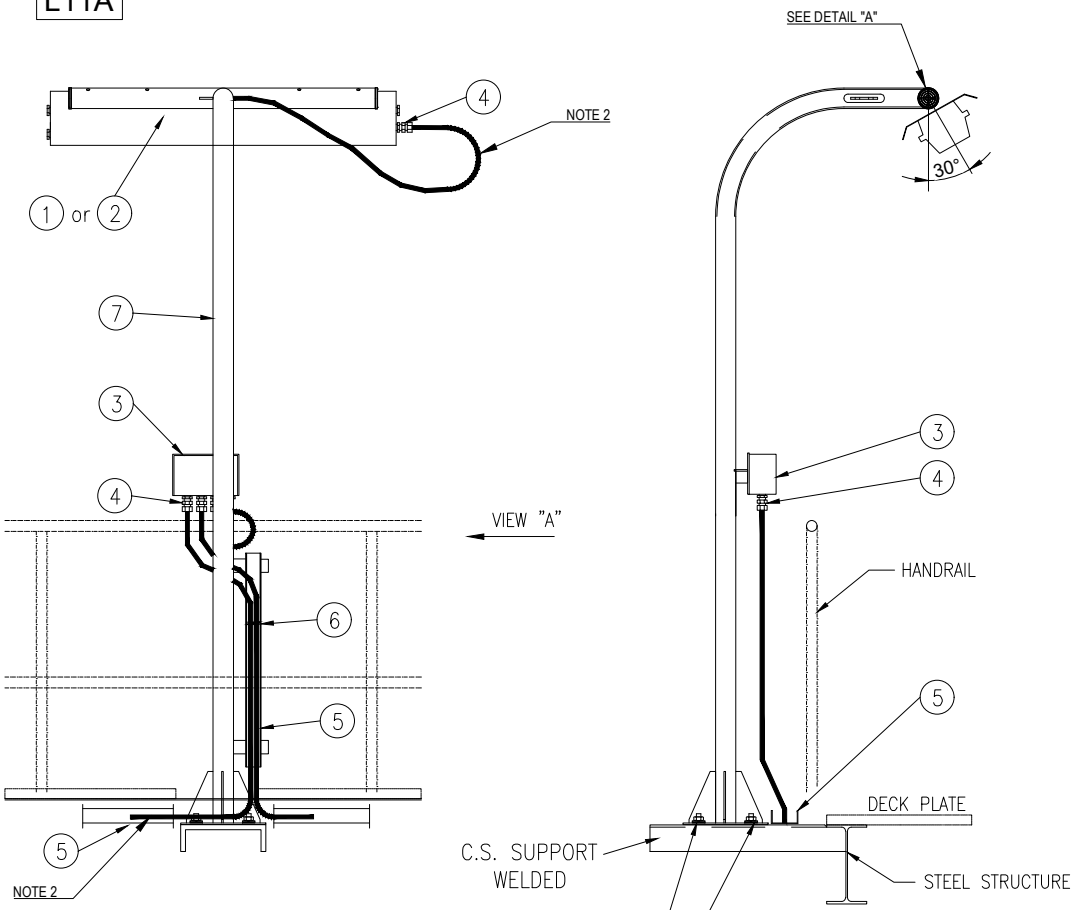
SHEET 014

REV. 02

F.to UNI A3: 420mmx297mm

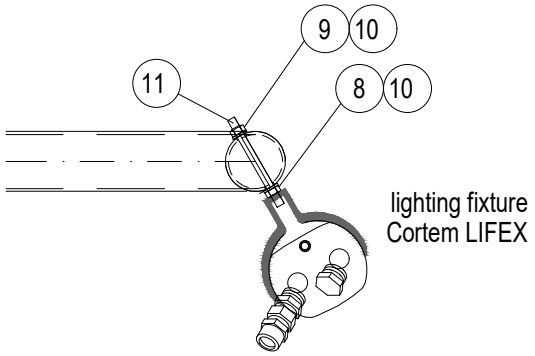
File Name : 123A90–DDL–EL–DG–20125

L11A



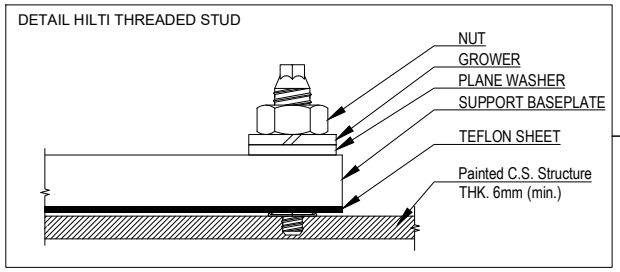
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

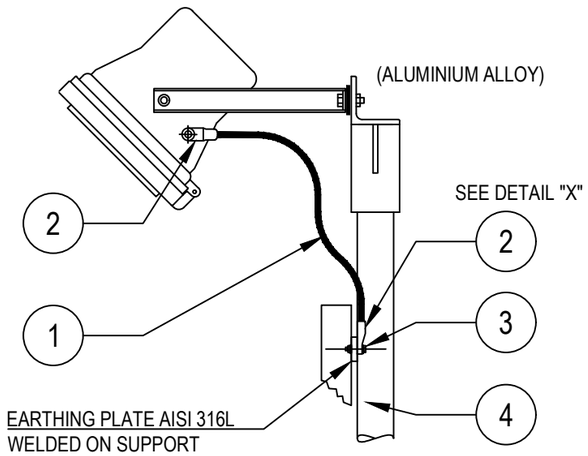
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

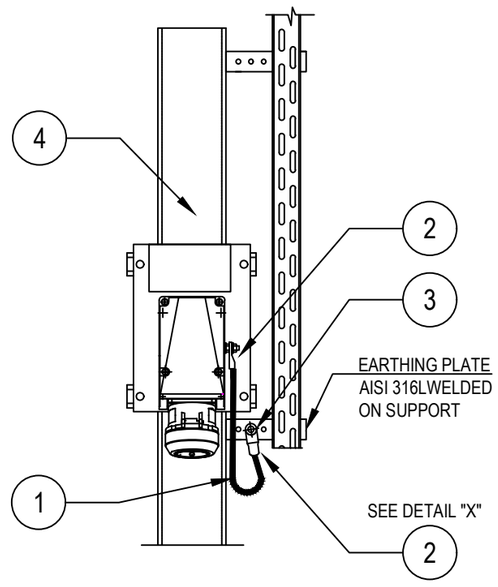
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

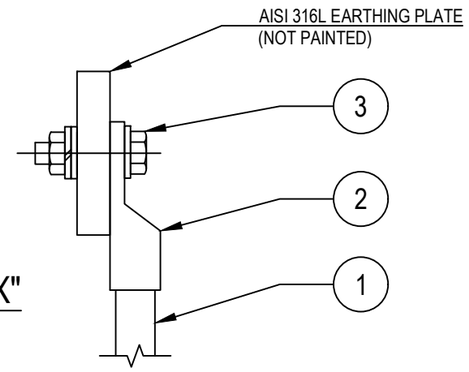
LIGHTING FIXTURE/GENERAL ITEM ON POLE



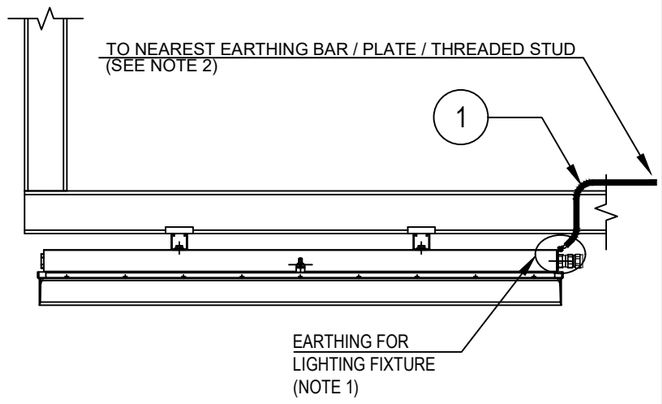
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

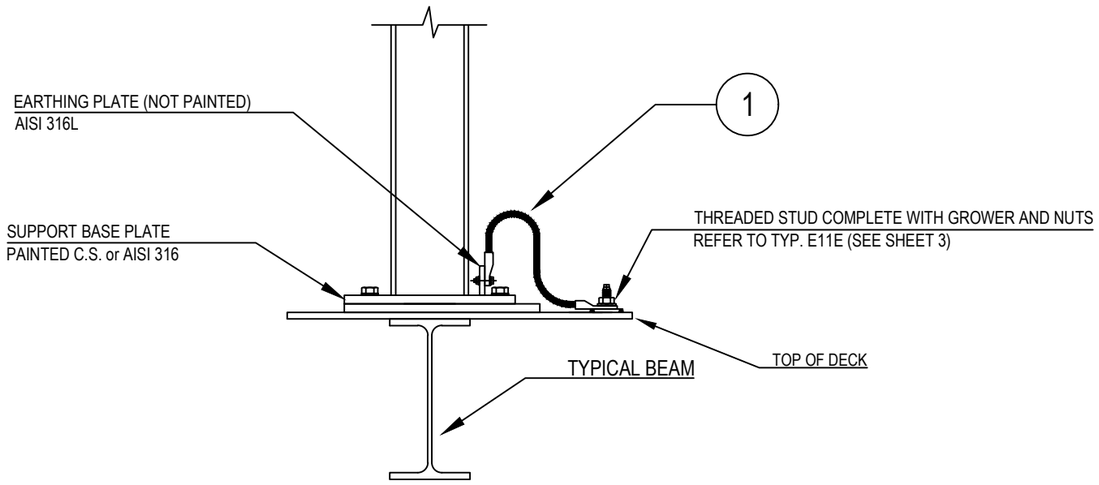
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

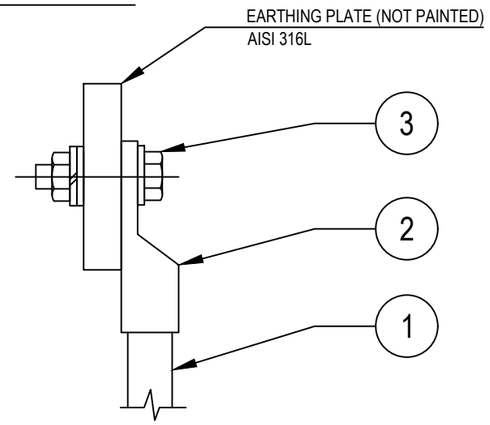
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

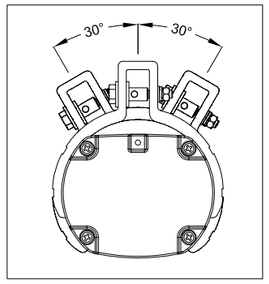
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

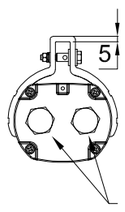
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

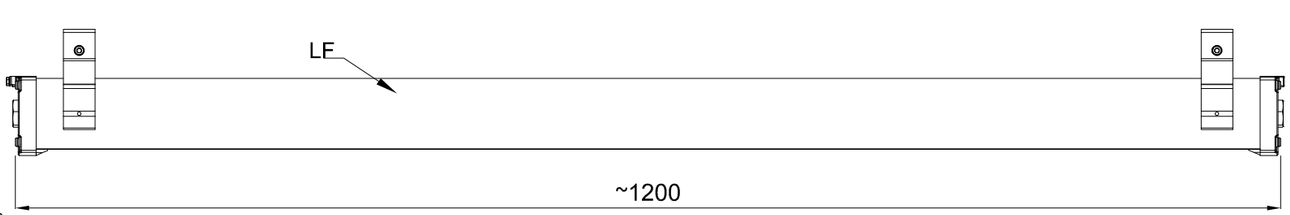
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

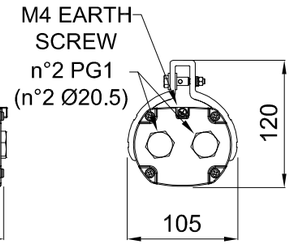


n°2 PG1
(n°2 Ø20.5)

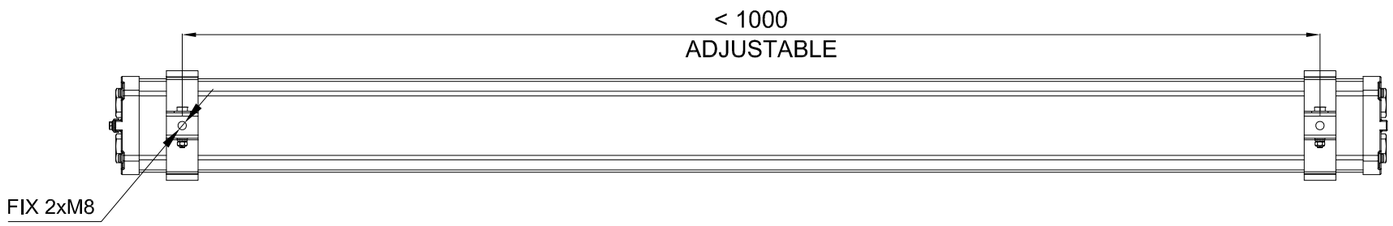
FRONT SIDE



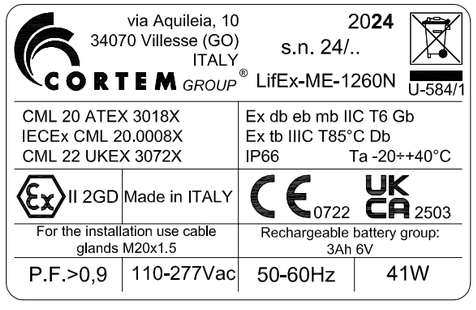
RIGHT SIDE (IN)



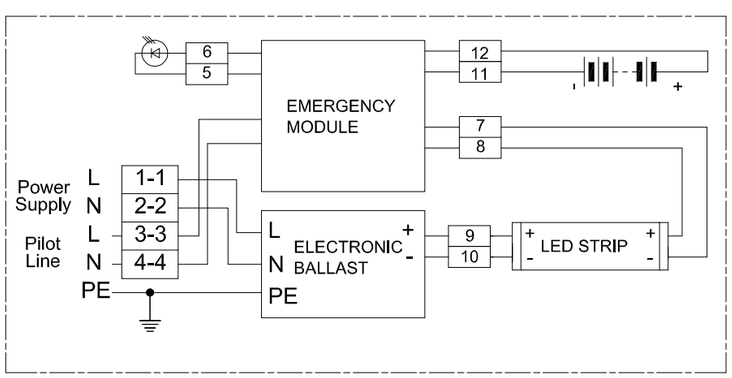
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-20	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001694		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 Miscellaneous Electrical Equipment

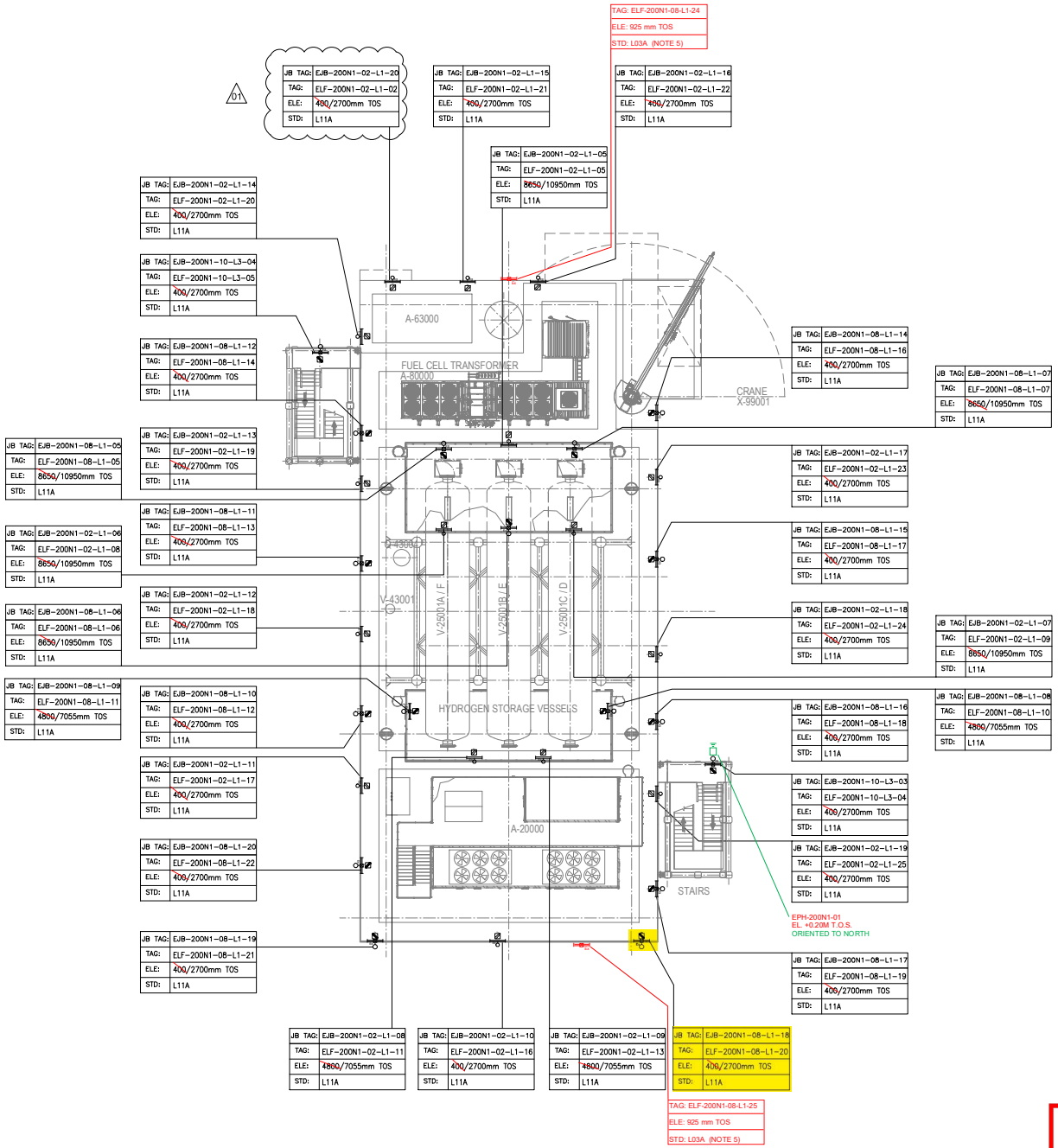
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	PL
4	Check nameplate data is correct.	NA
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	PL
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

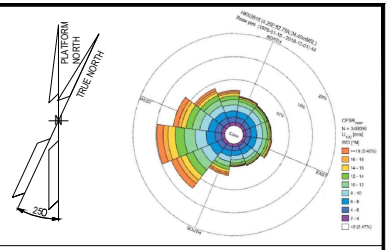
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-28	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-28T07:35:14.615Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T09:40:10.186Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1

- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. — ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. — ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. — EJB-200N1-08-L1-01 — TYPE: L21E1
  - P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. — ELF-200N1-08-L1-01
  - P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. — ELF-200N1-08-L1-02
  - P-EJB-200N1-08-L1-07 — 4G4_E Arm. — EJB-200N1-08-L1-07 — TYPE: L21E1
    - P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. — ELF-200N1-08-L1-03
    - P-EJB-200N1-08-L1-06 — 4G4_E Arm. — EJB-200N1-08-L1-06 — TYPE: L21E1
      - P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. — ELF-200N1-08-L1-06
    - P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. — ELF-200N1-08-L1-07
    - P-EJB-200N1-08-L1-05 — 4G4_E Arm. — EJB-200N1-08-L1-05 — TYPE: L21E1
      - P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. — ELF-200N1-08-L1-04
      - P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. — ELF-200N1-08-L1-05
  - P-EJB-200N1-08-L1-03 — 4G4_E Arm. — EJB-200N1-08-L1-03 — TYPE: L21E1
    - P-EJB-200N1-08-L1-09 — 4G4_E Arm. — EJB-200N1-08-L1-09 — TYPE: L21E1
      - P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. — ELF-200N1-08-L1-08
      - P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. — ELF-200N1-08-L1-11
    - P-EJB-200N1-08-L1-08 — 4G4_E Arm. — EJB-200N1-08-L1-08 — TYPE: L21E1
      - P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. — ELF-200N1-08-L1-10
      - P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. — ELF-200N1-08-L1-09
    - P-EJB-200N1-08-L1-12 — 4G4_E Arm. — EJB-200N1-08-L1-12 — TYPE: L21E1
      - P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. — ELF-200N1-08-L1-14
      - P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. — ELF-200N1-08-L1-24
      - P-EJB-200N1-08-L1-11 — 4G4_E Arm. — EJB-200N1-08-L1-11 — TYPE: L21E1
        - P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. — ELF-200N1-08-L1-13
        - P-EJB-200N1-08-L1-10 — 4G4_E Arm. — EJB-200N1-08-L1-10 — TYPE: L21E1
          - P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. — ELF-200N1-08-L1-12
          - P-EJB-200N1-08-L1-20 — 4G4_E Arm. — EJB-200N1-08-L1-20 — TYPE: L21E1
            - P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. — ELF-200N1-08-L1-22
- P-EJB-200N1-08-L1-16 — 4G4_E Arm. — EJB-200N1-08-L1-16 — TYPE: L21E1
  - P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. — ELF-200N1-08-L1-18
  - P-EJB-200N1-08-L1-17 — 4G4_E Arm. — EJB-200N1-08-L1-17 — TYPE: L21E1
    - P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. — ELF-200N1-08-L1-19
    - P-EJB-200N1-08-L1-18 — 4G4_E Arm. — EJB-200N1-08-L1-18 — TYPE: L21E1
      - P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. — ELF-200N1-08-L1-20
      - P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. — ELF-200N1-08-L1-25
      - P-EJB-200N1-08-L1-19 — 4G4_E Arm. — EJB-200N1-08-L1-19 — TYPE: L21E1
        - P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. — ELF-200N1-08-L1-21
        - P-EJB-200N1-08-L1-15 — 4G4_E Arm. — EJB-200N1-08-L1-15 — TYPE: L21E1
          - P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. — ELF-200N1-08-L1-17
          - P-EJB-200N1-08-L1-14 — 4G4_E Arm. — EJB-200N1-08-L1-14 — TYPE: L21E1
            - P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. — ELF-200N1-08-L1-16

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

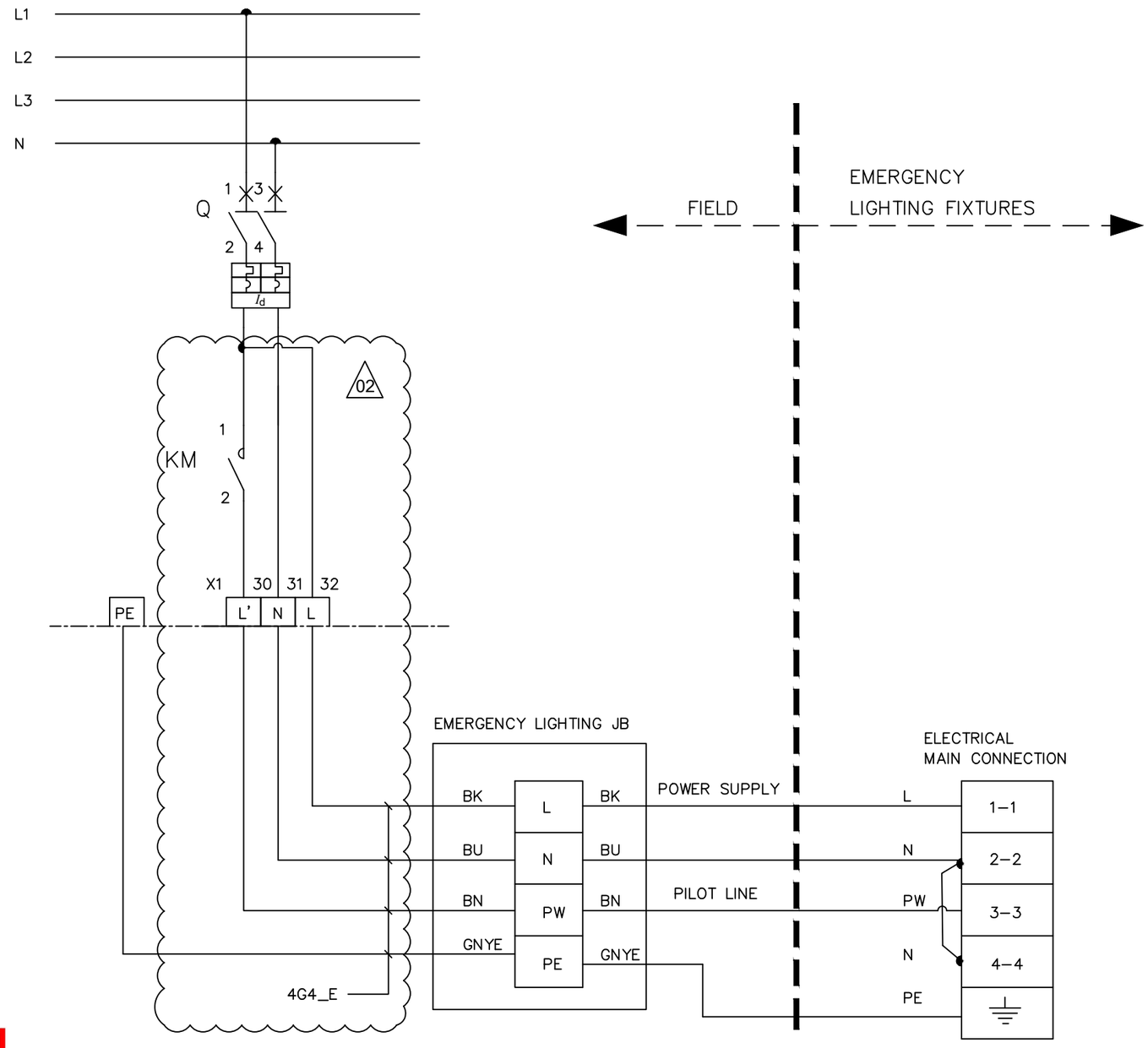
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

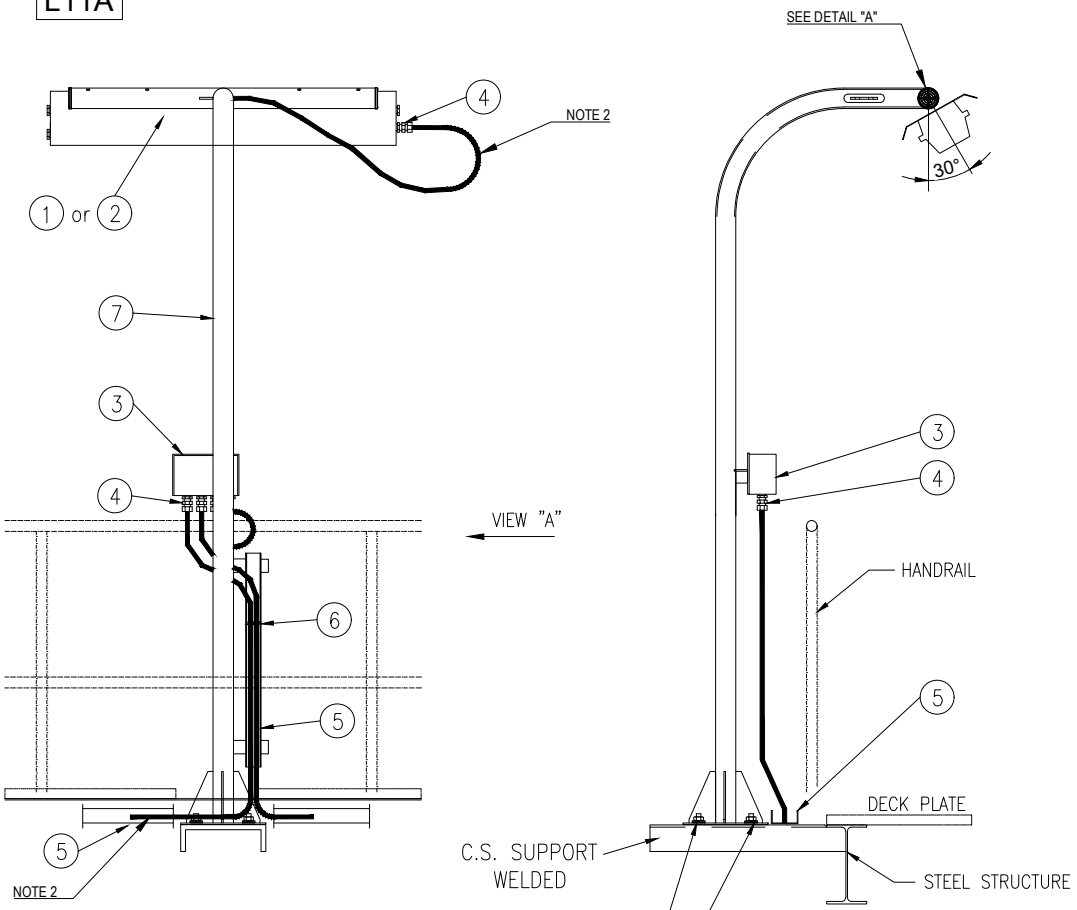
SHEET 014

REV. 02

F.to UNI A3: 420mmx297mm

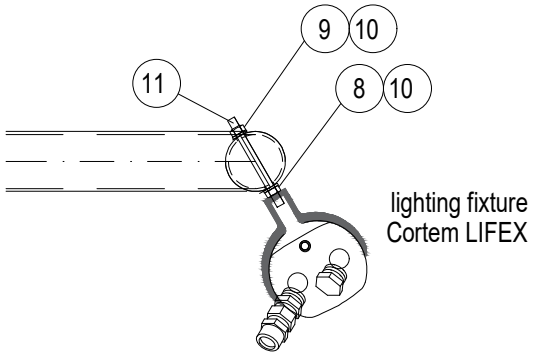
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L11A



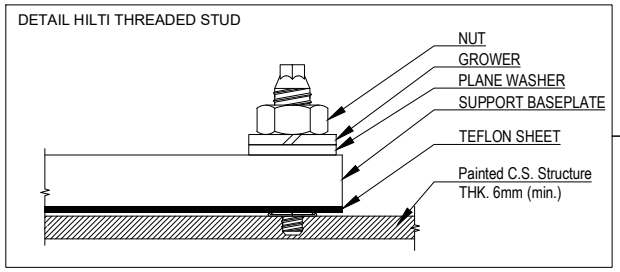
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

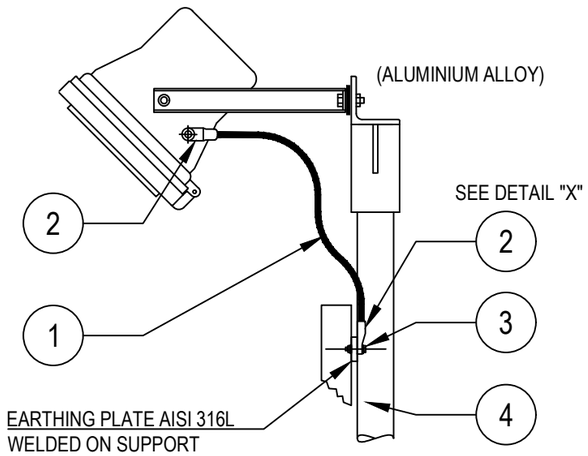
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

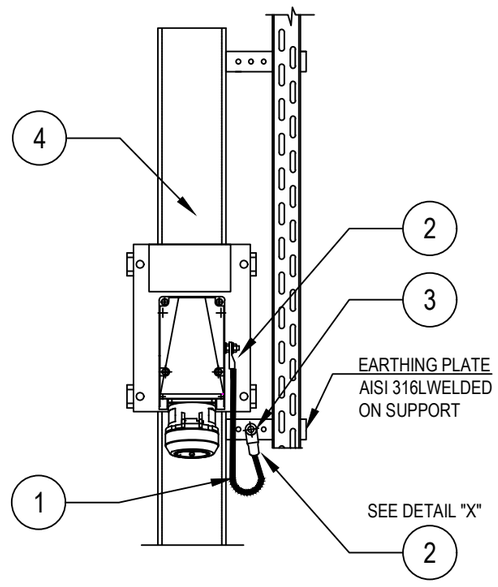
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

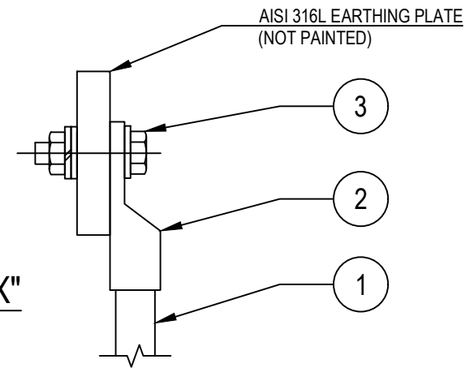
LIGHTING FIXTURE/GENERAL ITEM ON POLE



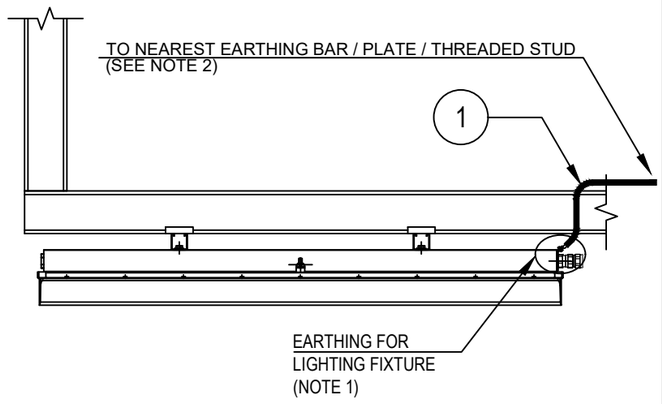
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

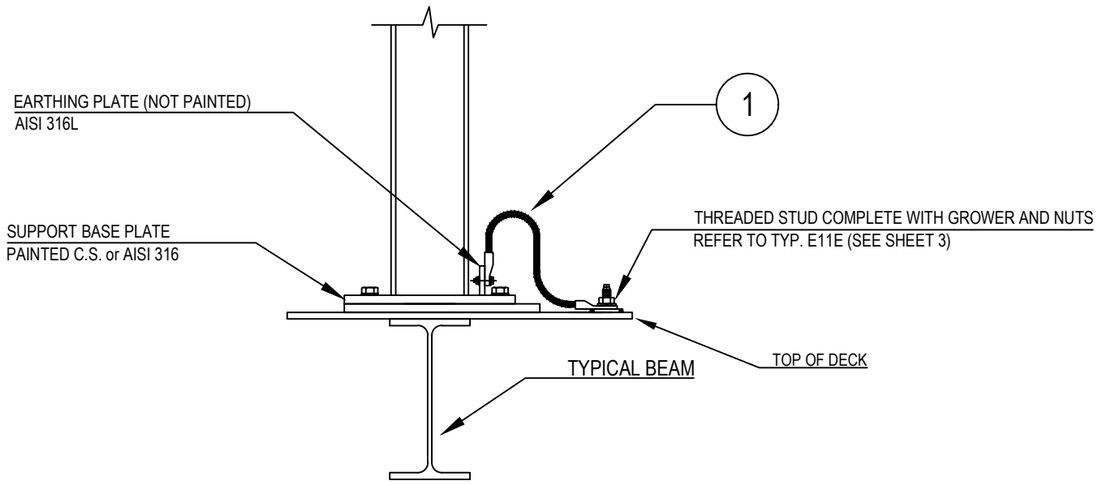
F.to UNI A3: 420mmx297mm

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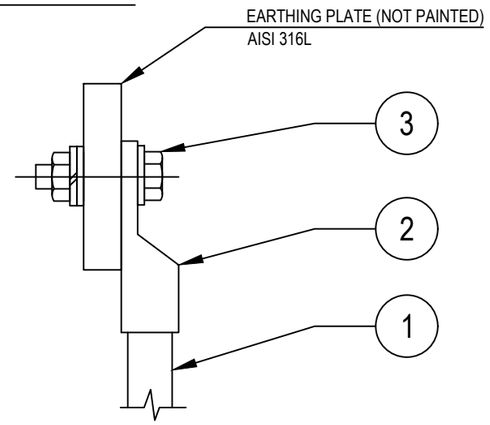
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

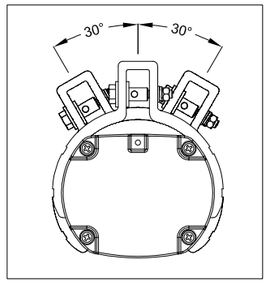
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

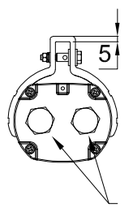
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

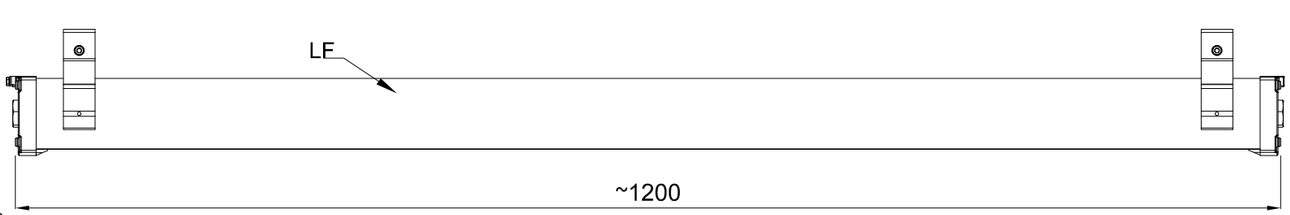
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

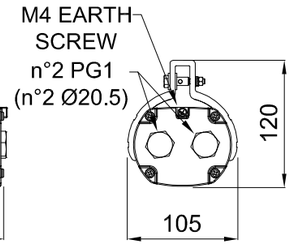


n°2 PG1
(n°2 Ø20.5)

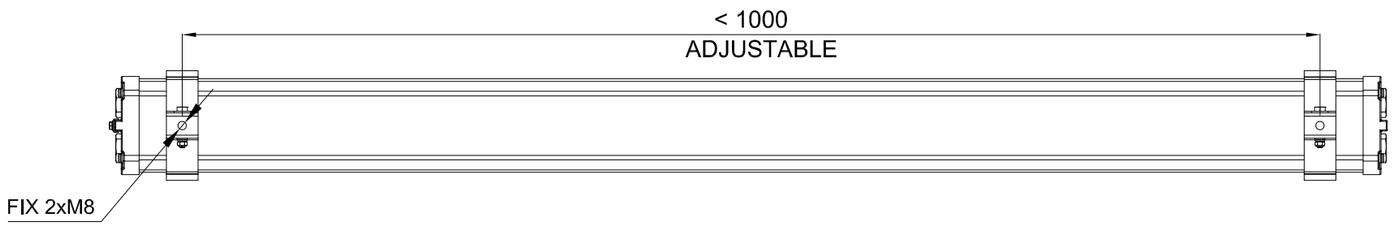
FRONT SIDE



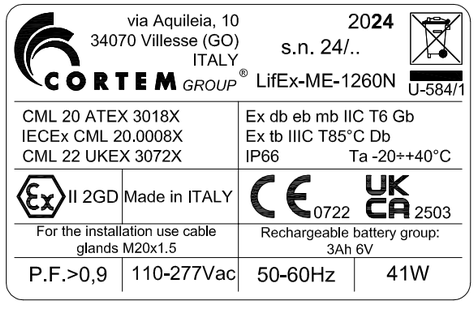
RIGHT SIDE (IN)



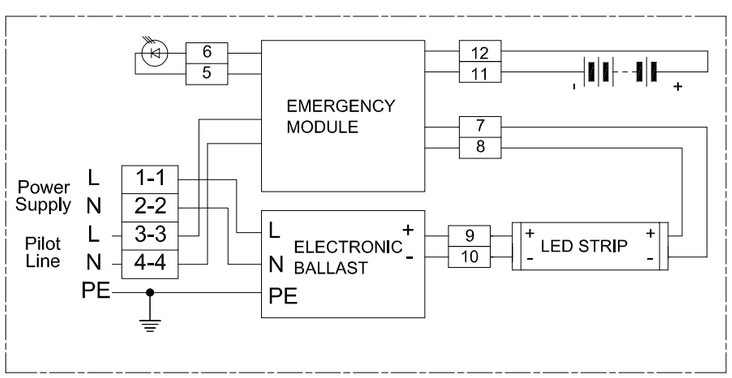
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

THIS DRAWING IS PROPERTY OF CORTEM SPA
AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ITEM	Tag	ELF-200N1-08-L1-21	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001695		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 Miscellaneous Electrical Equipment

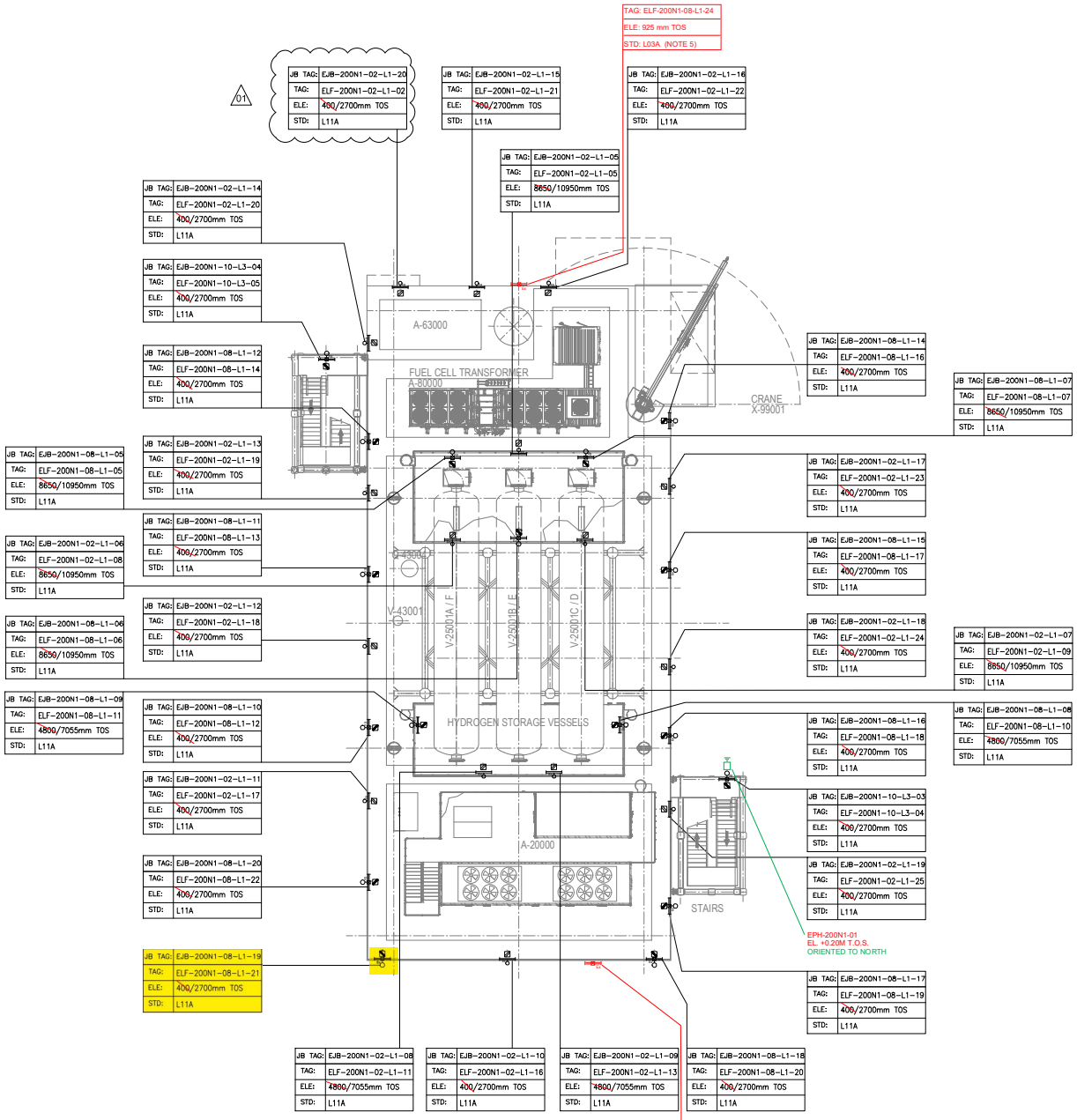
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	PL
4	Check nameplate data is correct.	NA
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	PL
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

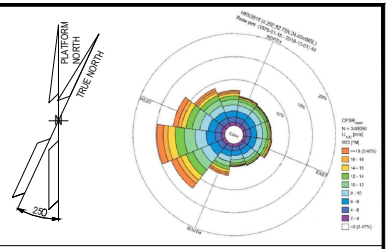
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-07	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-07T08:04:35.714Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T09:31:52.768Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm.

EJB-200N1-08-L1-01 — TYPE: L21E1
- P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
- P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm.

EJB-200N1-08-L1-07 — TYPE: L21E1
- P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
- P-EJB-200N1-08-L1-06 — 4G4_E Arm.

EJB-200N1-08-L1-06 — TYPE: L21E1
- P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
- P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06

EJB-200N1-08-L1-05 — TYPE: L21E1
- P-EJB-200N1-08-L1-05 — 4G4_E Arm.
- P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
- P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

P-EJB-200N1-08-L1-03 — 4G4_E Arm.

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

EJB-200N1-08-L1-16 — TYPE: L21E1
- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm.

EJB-200N1-08-L1-17 — TYPE: L21E1
- P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
- P-EJB-200N1-08-L1-18 — 4G4_E Arm.

EJB-200N1-08-L1-18 — TYPE: L21E1
- P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
- P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25
- P-EJB-200N1-08-L1-19 — 4G4_E Arm.

EJB-200N1-08-L1-19 — TYPE: L21E1
- P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21

P-EJB-200N1-08-L1-15 — 4G4_E Arm.

EJB-200N1-08-L1-15 — TYPE: L21E1
- P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
- P-EJB-200N1-08-L1-14 — 4G4_E Arm.

EJB-200N1-08-L1-14 — TYPE: L21E1
- P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

EJB-200N1-08-L1-03 — TYPE: L21E1

P-EJB-200N1-08-L1-12 — 4G4_E Arm.

EJB-200N1-08-L1-12 — TYPE: L21E1
- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

EJB-200N1-08-L1-11 — TYPE: L21E1
- P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
- P-EJB-200N1-08-L1-10 — 4G4_E Arm.

EJB-200N1-08-L1-10 — TYPE: L21E1
- P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12
- P-EJB-200N1-08-L1-20 — 4G4_E Arm.

EJB-200N1-08-L1-20 — TYPE: L21E1
- P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22

EJB-200N1-08-L1-09 — TYPE: L21E1
- P-EJB-200N1-08-L1-09 — 4G4_E Arm.
- P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

EJB-200N1-08-L1-08 — TYPE: L21E1
- P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
- P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09
- P-EJB-200N1-08-L1-08 — 4G4_E Arm.

P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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F.to UNI A3: 420mmx297mm

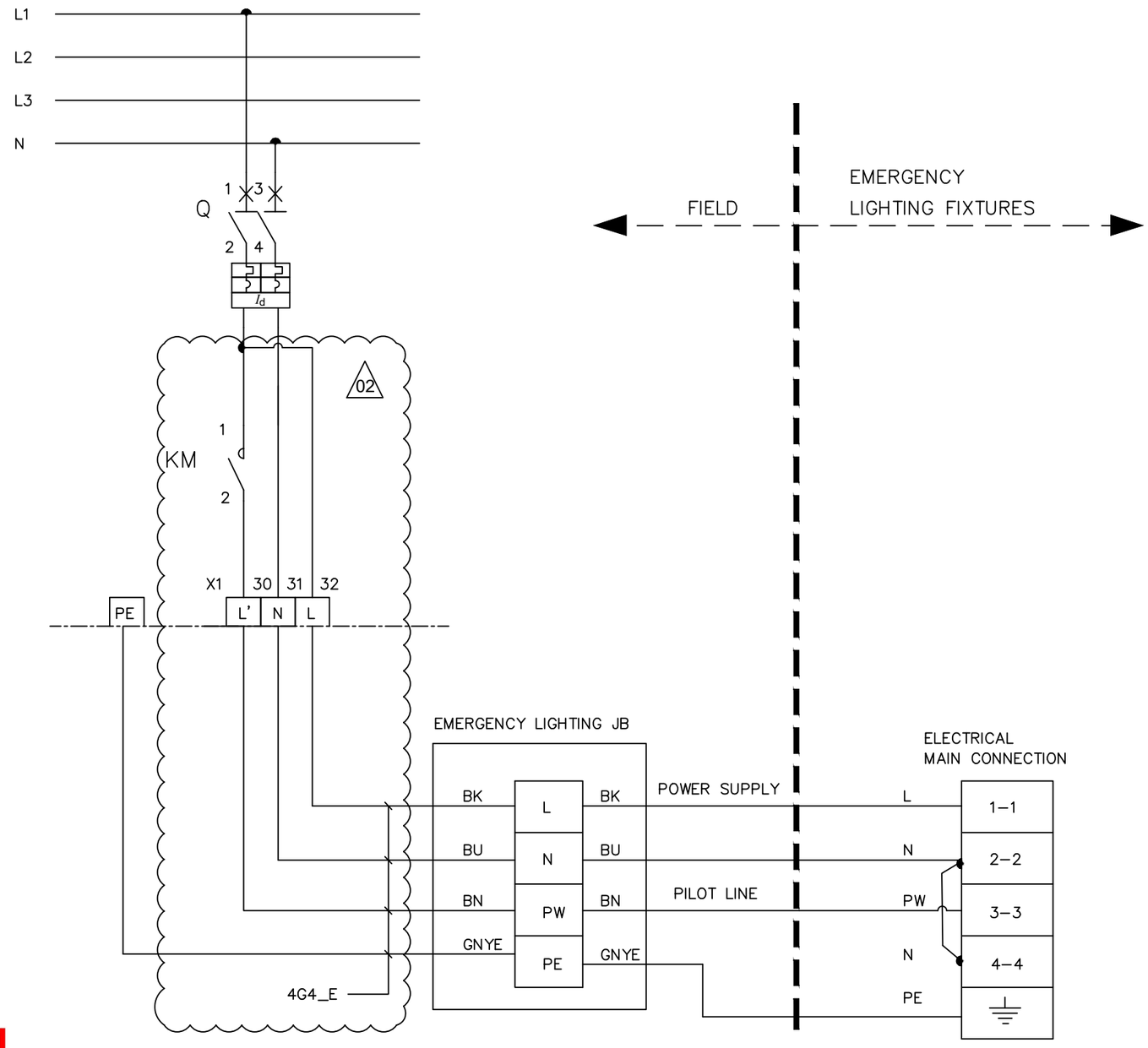
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DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

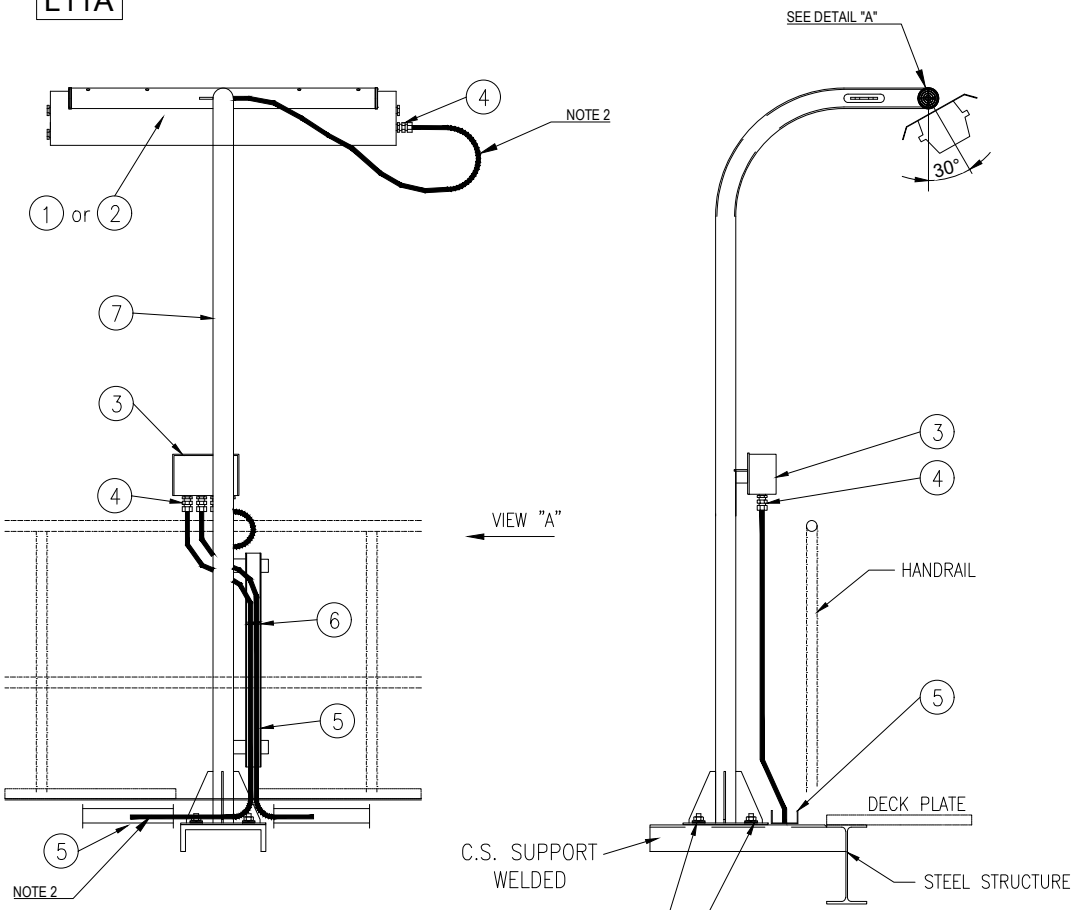
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REV. 02

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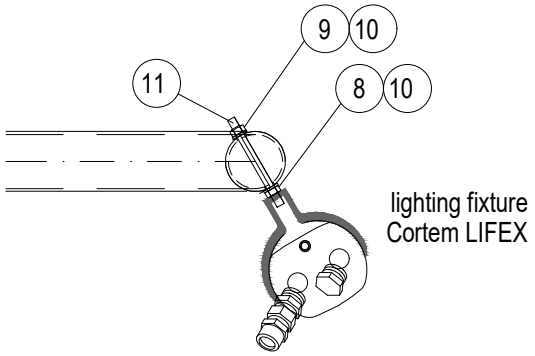
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L11A



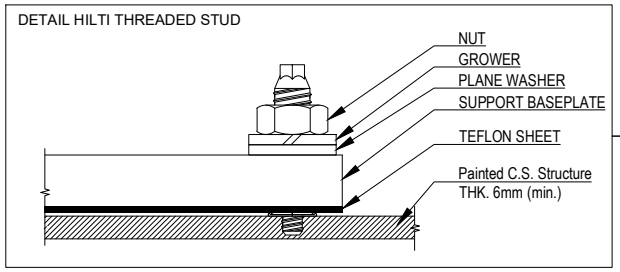
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

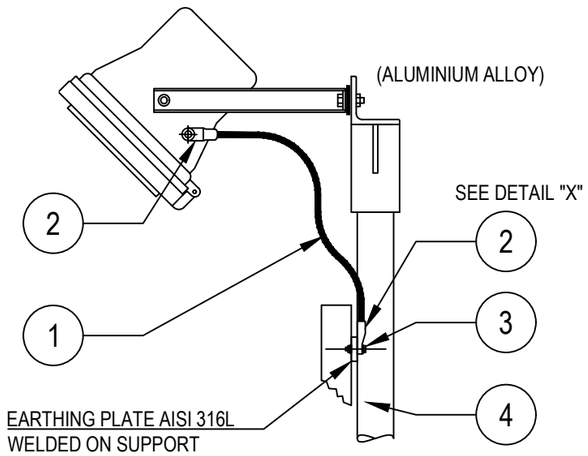
F.to UNI A3: 420mmx297mm

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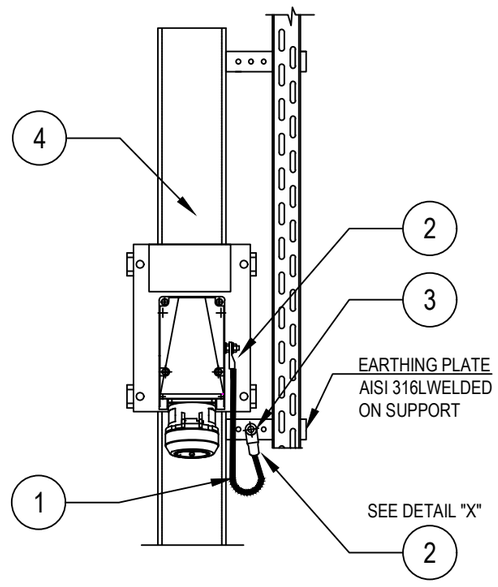
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

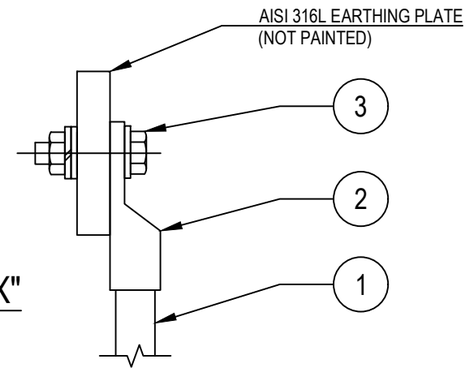
LIGHTING FIXTURE/GENERAL ITEM ON POLE



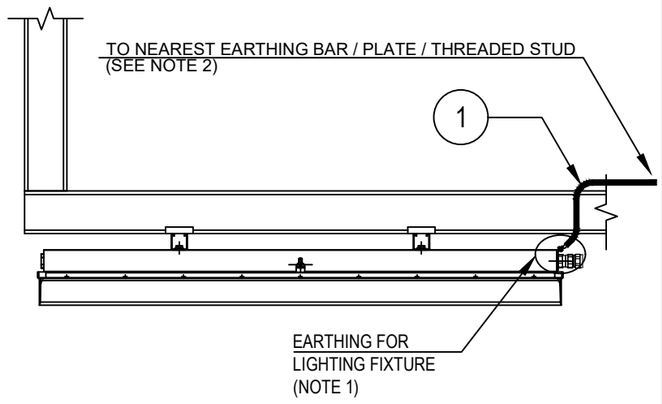
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

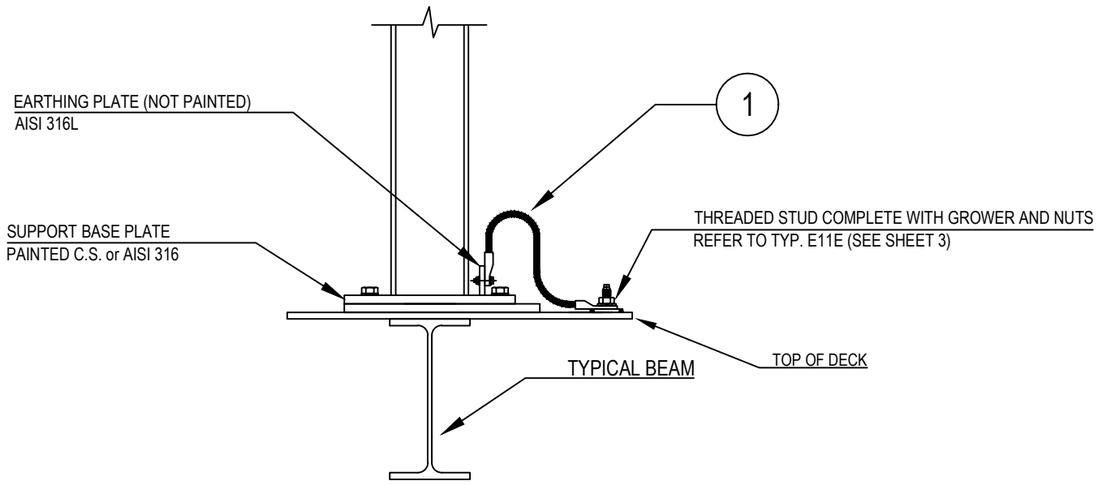
F.to UNI A3: 420mmx297mm

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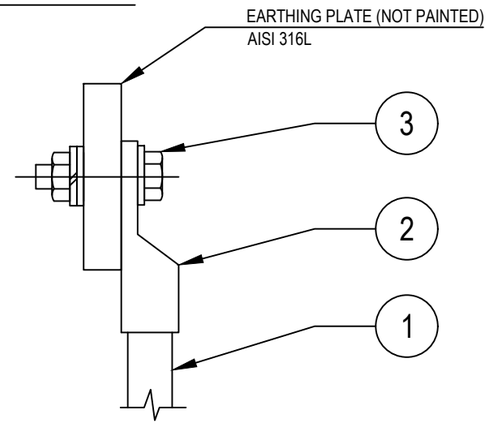
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

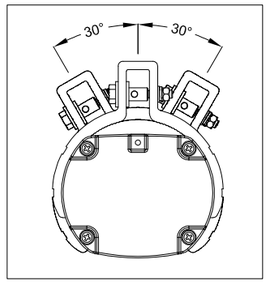
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

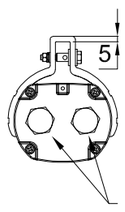
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

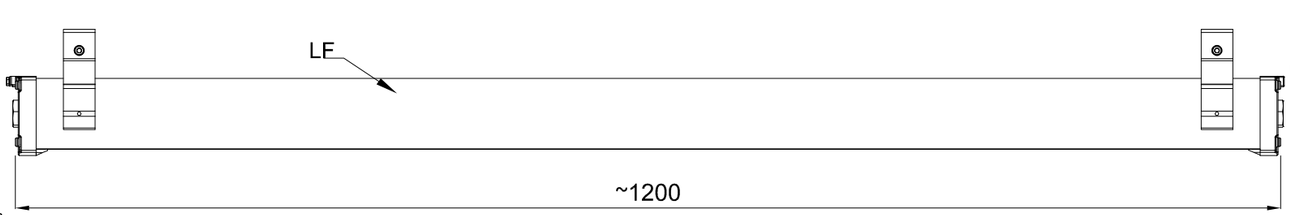
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

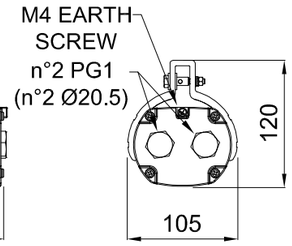


n°2 PG1
(n°2 Ø20.5)

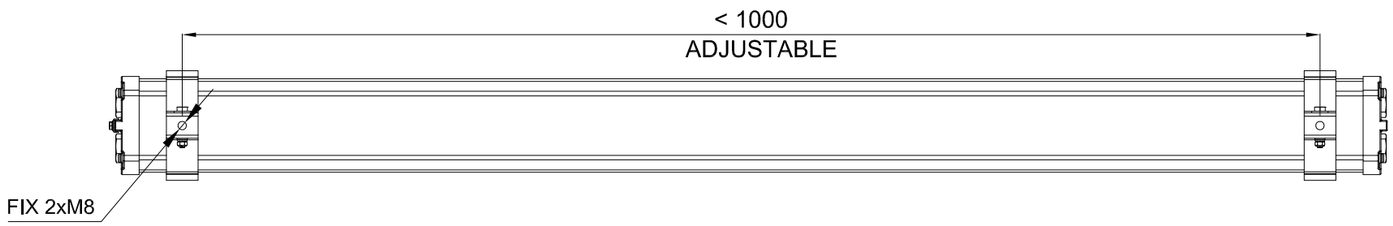
FRONT SIDE



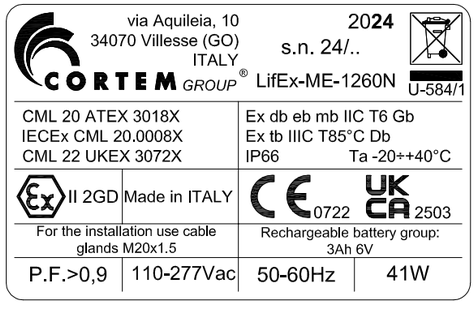
RIGHT SIDE (IN)



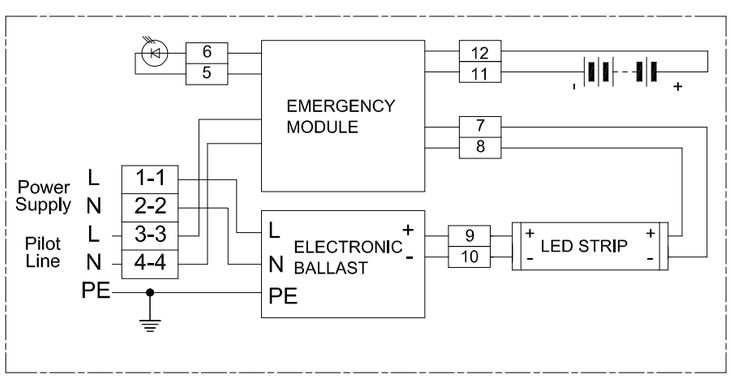
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ROSETTI MARINO — CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-22	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001696		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 — Miscellaneous Electrical Equipment

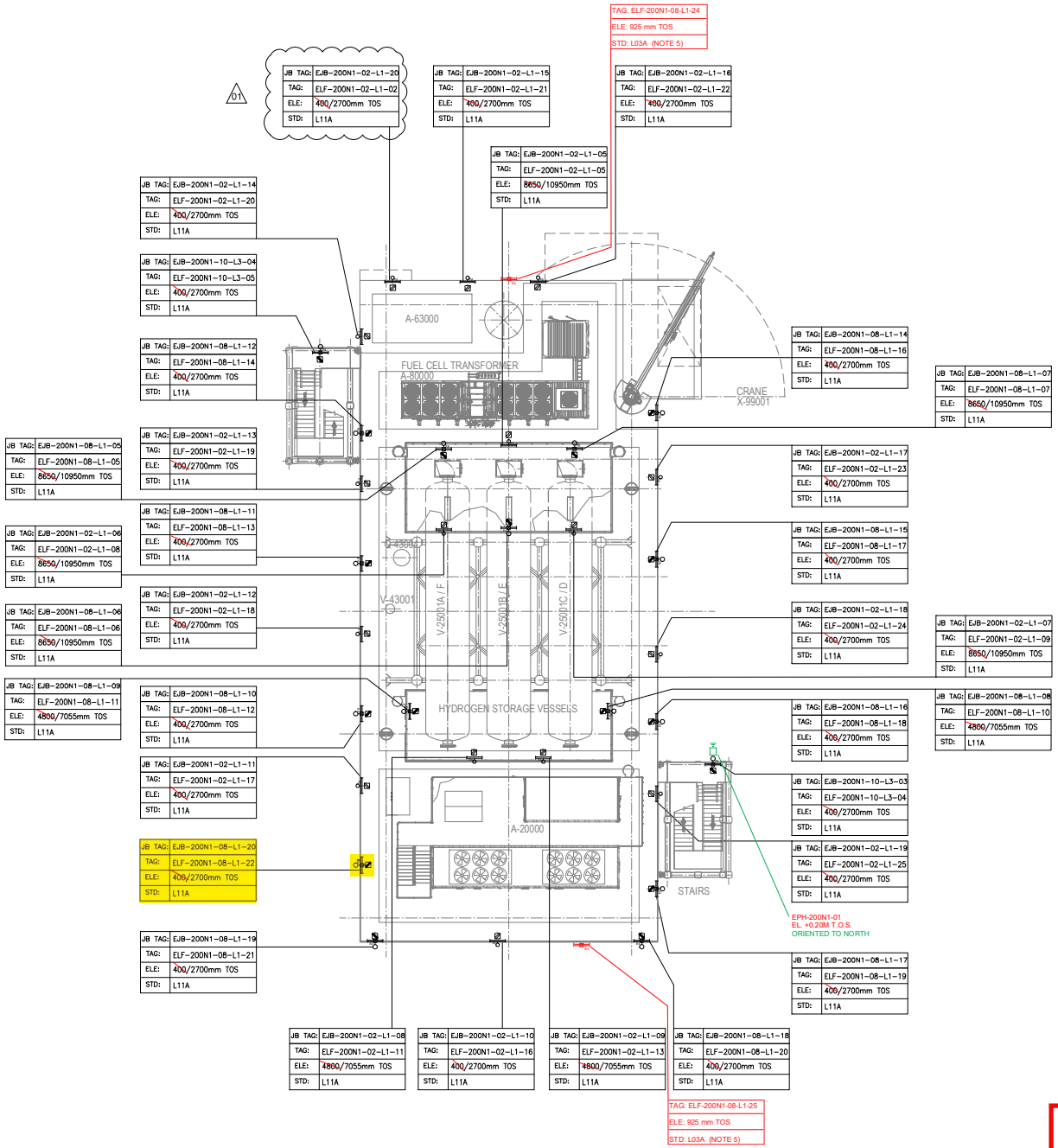
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	PL
4	Check nameplate data is correct.	NA
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	PL
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

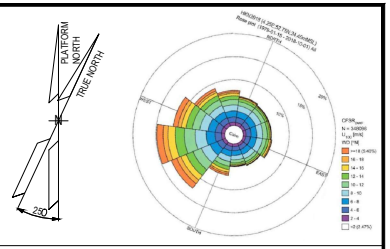
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-28	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-28T07:35:25.570Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T09:19:57.877Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. → EJB-200N1-08-L1-01

EJB-200N1-08-L1-01 — TYPE: L21E1
- P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
- P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm. → EJB-200N1-08-L1-07

EJB-200N1-08-L1-07 — TYPE: L21E1
- P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
- P-EJB-200N1-08-L1-06 — 4G4_E Arm. → EJB-200N1-08-L1-06
- P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
- P-EJB-200N1-08-L1-05 — 4G4_E Arm. → EJB-200N1-08-L1-05

EJB-200N1-08-L1-05 — TYPE: L21E1
- P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
- P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

EJB-200N1-08-L1-06 — TYPE: L21E1
- P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06

P-EJB-200N1-08-L1-03 — 4G4_E Arm.

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

EJB-200N1-08-L1-16 — TYPE: L21E1
- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm.

EJB-200N1-08-L1-17 — TYPE: L21E1
- P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
- P-EJB-200N1-08-L1-18 — 4G4_E Arm.

EJB-200N1-08-L1-18 — TYPE: L21E1
- P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
- P-EJB-200N1-08-L1-19 — 4G4_E Arm.

EJB-200N1-08-L1-19 — TYPE: L21E1
- P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
- P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25

P-EJB-200N1-08-L1-15 — 4G4_E Arm.

EJB-200N1-08-L1-15 — TYPE: L21E1
- P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
- P-EJB-200N1-08-L1-14 — 4G4_E Arm.

EJB-200N1-08-L1-14 — TYPE: L21E1
- P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

P-EJB-200N1-08-L1-12 — 4G4_E Arm.

EJB-200N1-08-L1-12 — TYPE: L21E1
- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

EJB-200N1-08-L1-11 — TYPE: L21E1
- P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
- P-EJB-200N1-08-L1-10 — 4G4_E Arm.

EJB-200N1-08-L1-10 — TYPE: L21E1
- P-EJB-200N1-08-L1-20 — 4G4_E Arm. → EJB-200N1-08-L1-20
- P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12

EJB-200N1-08-L1-20 — TYPE: L21E1
- P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22

EJB-200N1-08-L1-03 — TYPE: L21E1
- P-EJB-200N1-08-L1-09 — 4G4_E Arm. → EJB-200N1-08-L1-09
- P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
- P-EJB-200N1-08-L1-08 — 4G4_E Arm. → EJB-200N1-08-L1-08

EJB-200N1-08-L1-08 — TYPE: L21E1
- P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
- P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09

EJB-200N1-08-L1-09 — TYPE: L21E1
- P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

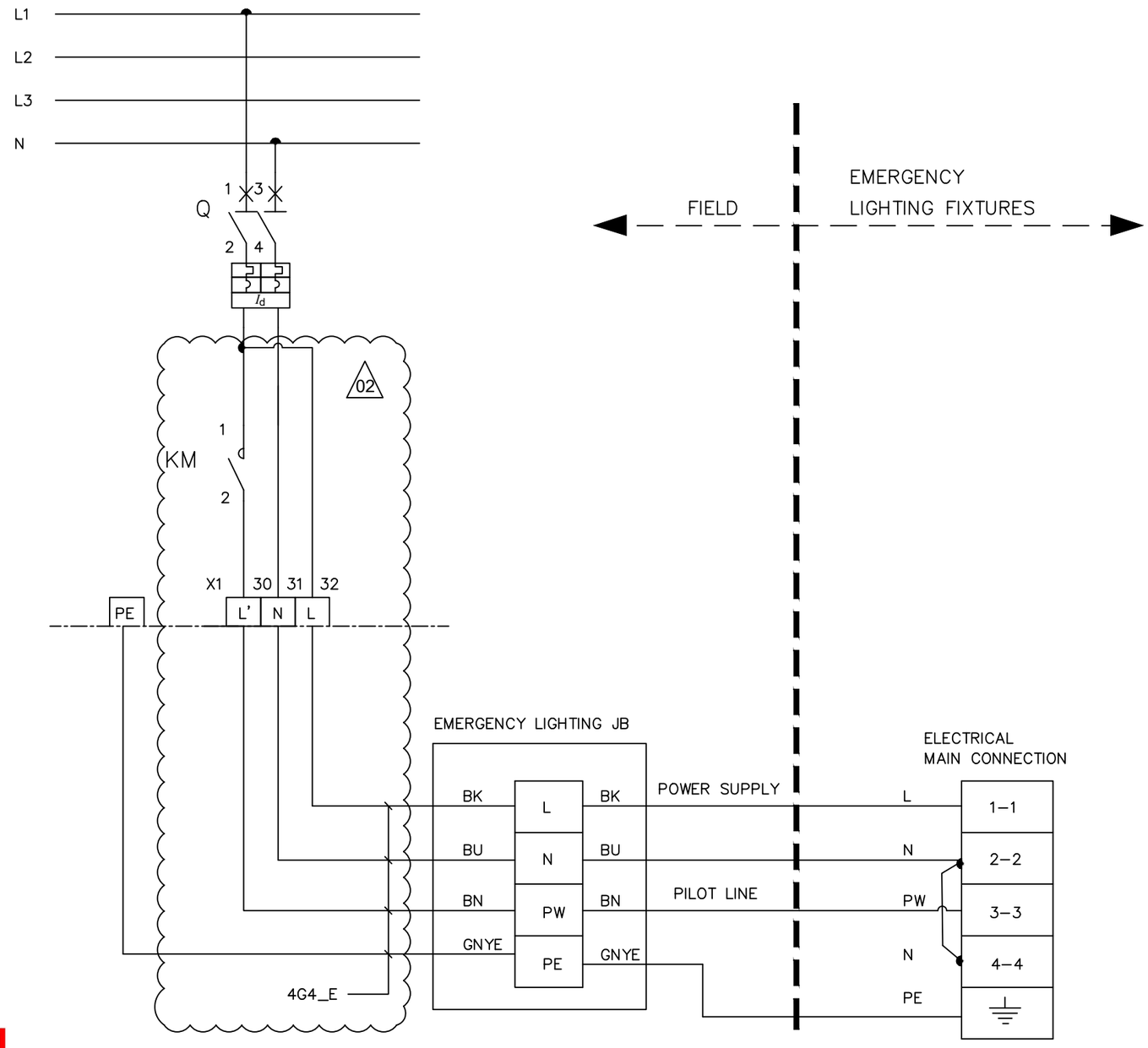
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

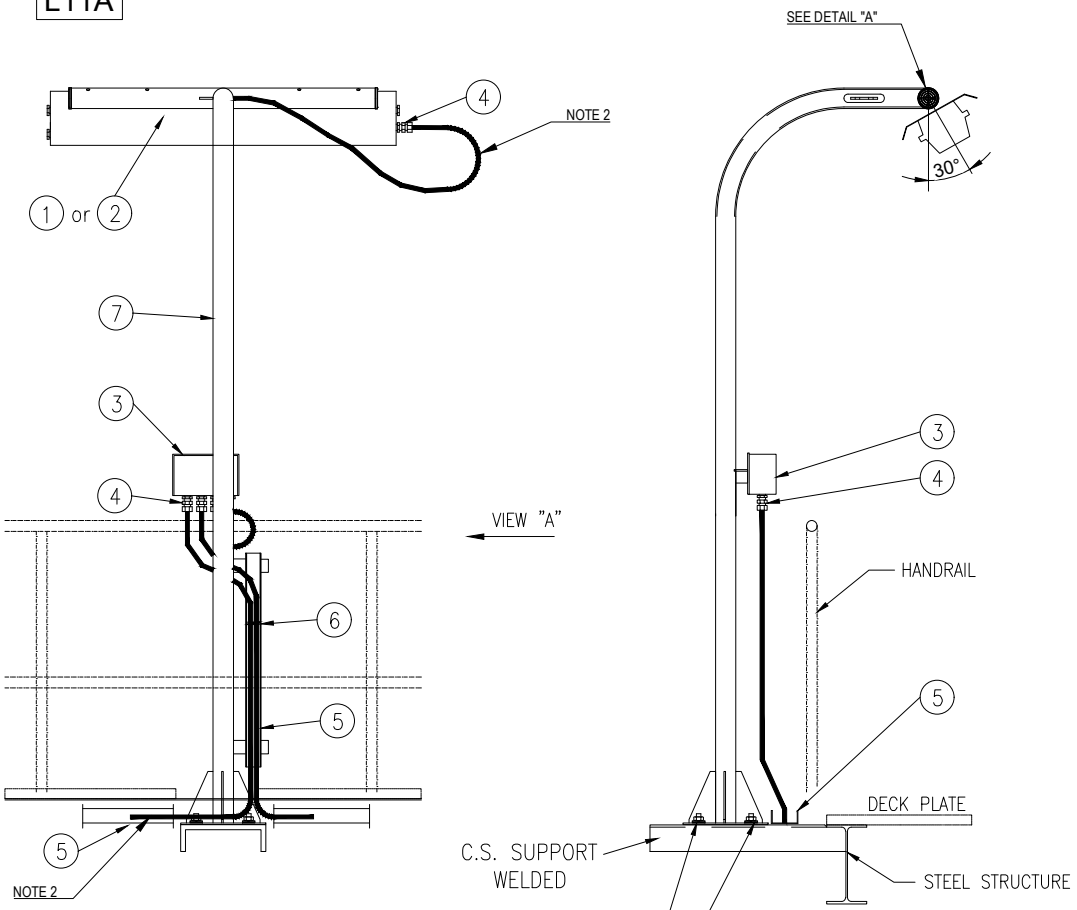
SHEET 014

REV. 02

F.to UNI A3: 420mmx297mm

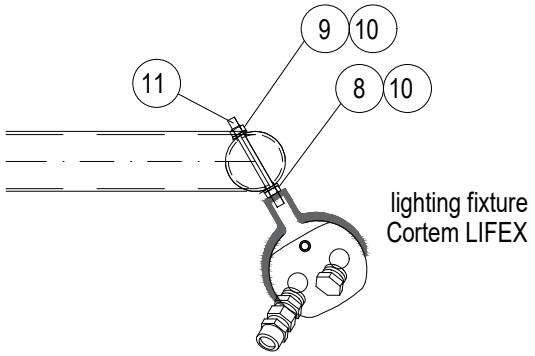
File Name : 123A90–DDL–EL–DG–20125

L11A



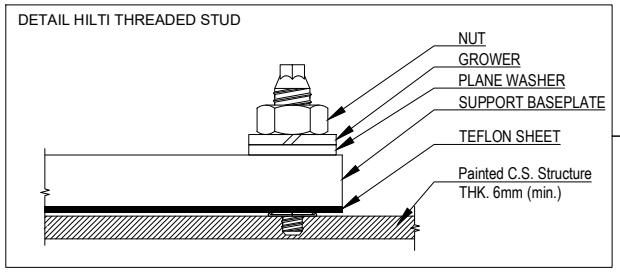
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

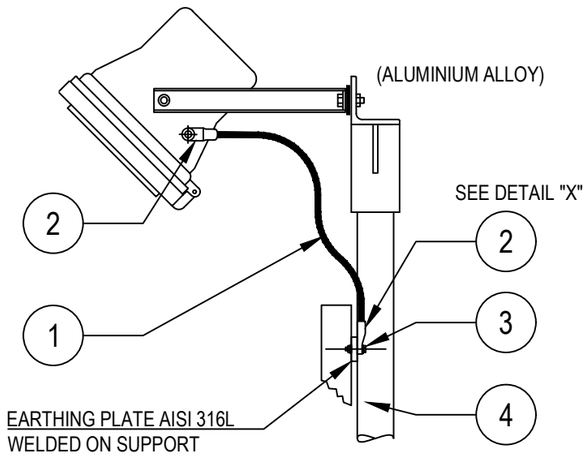
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

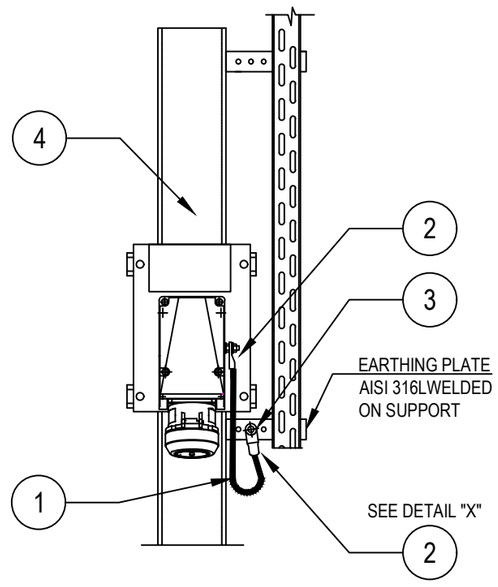
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

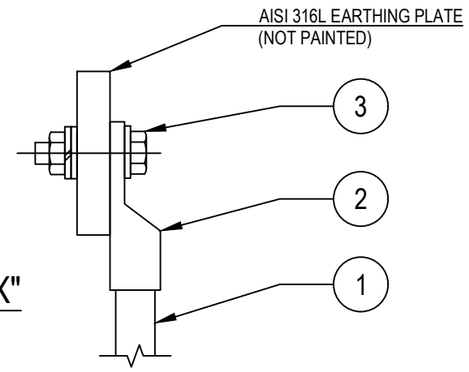
LIGHTING FIXTURE/GENERAL ITEM ON POLE



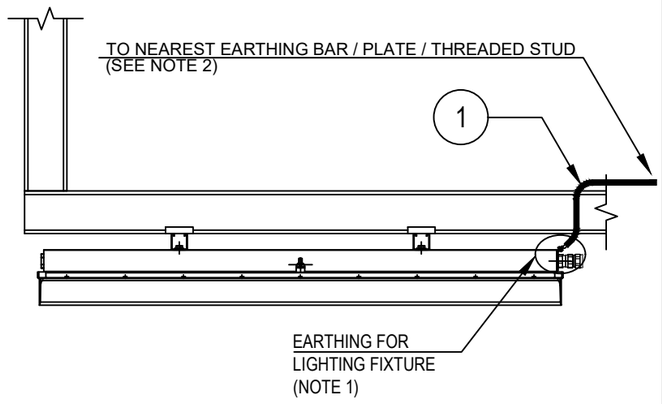
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

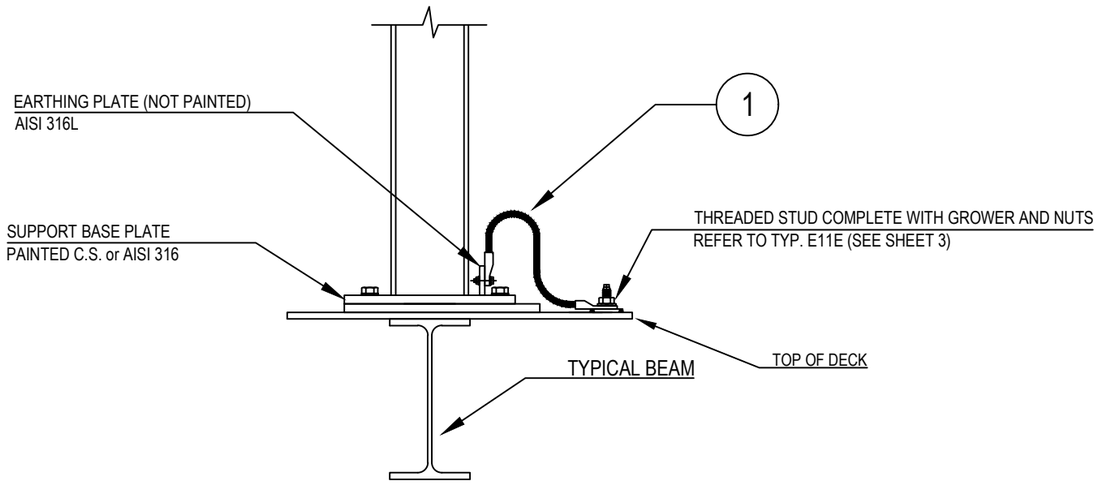
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

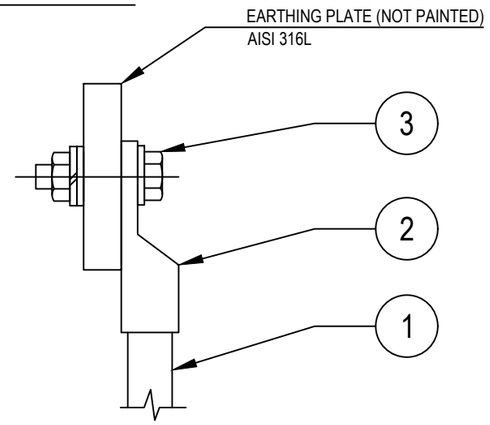
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

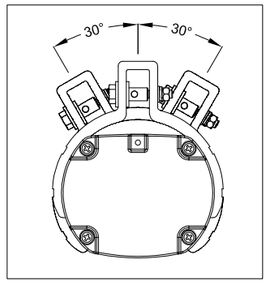
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

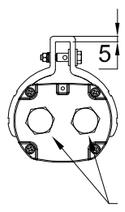
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

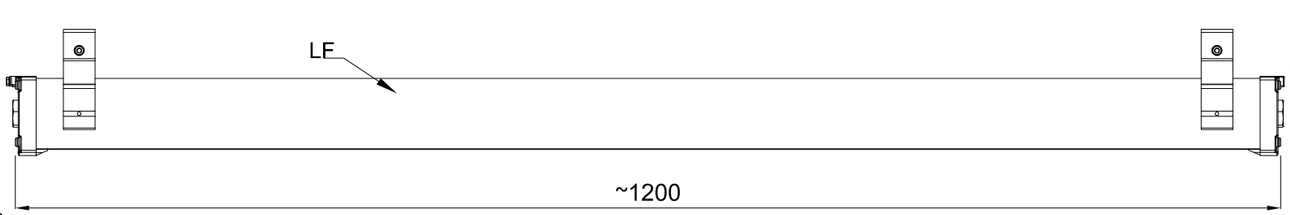
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

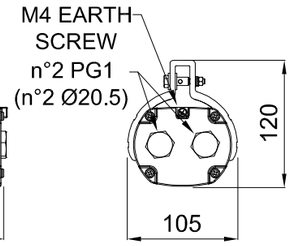


n°2 PG1
(n°2 Ø20.5)

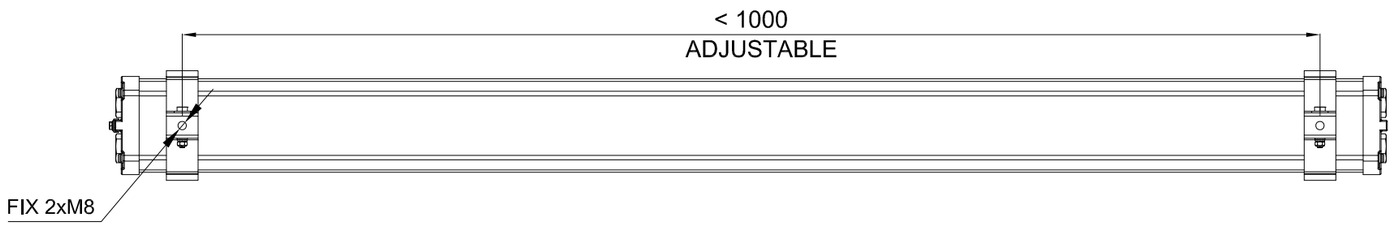
FRONT SIDE



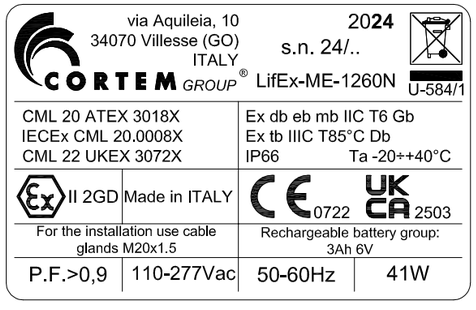
RIGHT SIDE (IN)



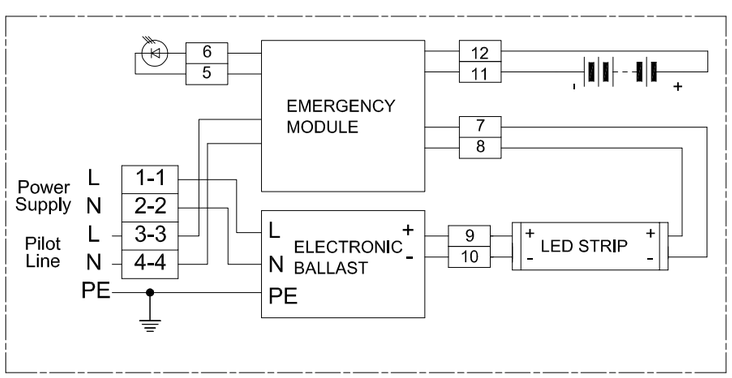
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ITEM	Tag	ELF-200N1-08-L1-24	: Emergency Lighting Fixture			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10004712		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 Miscellaneous Electrical Equipment

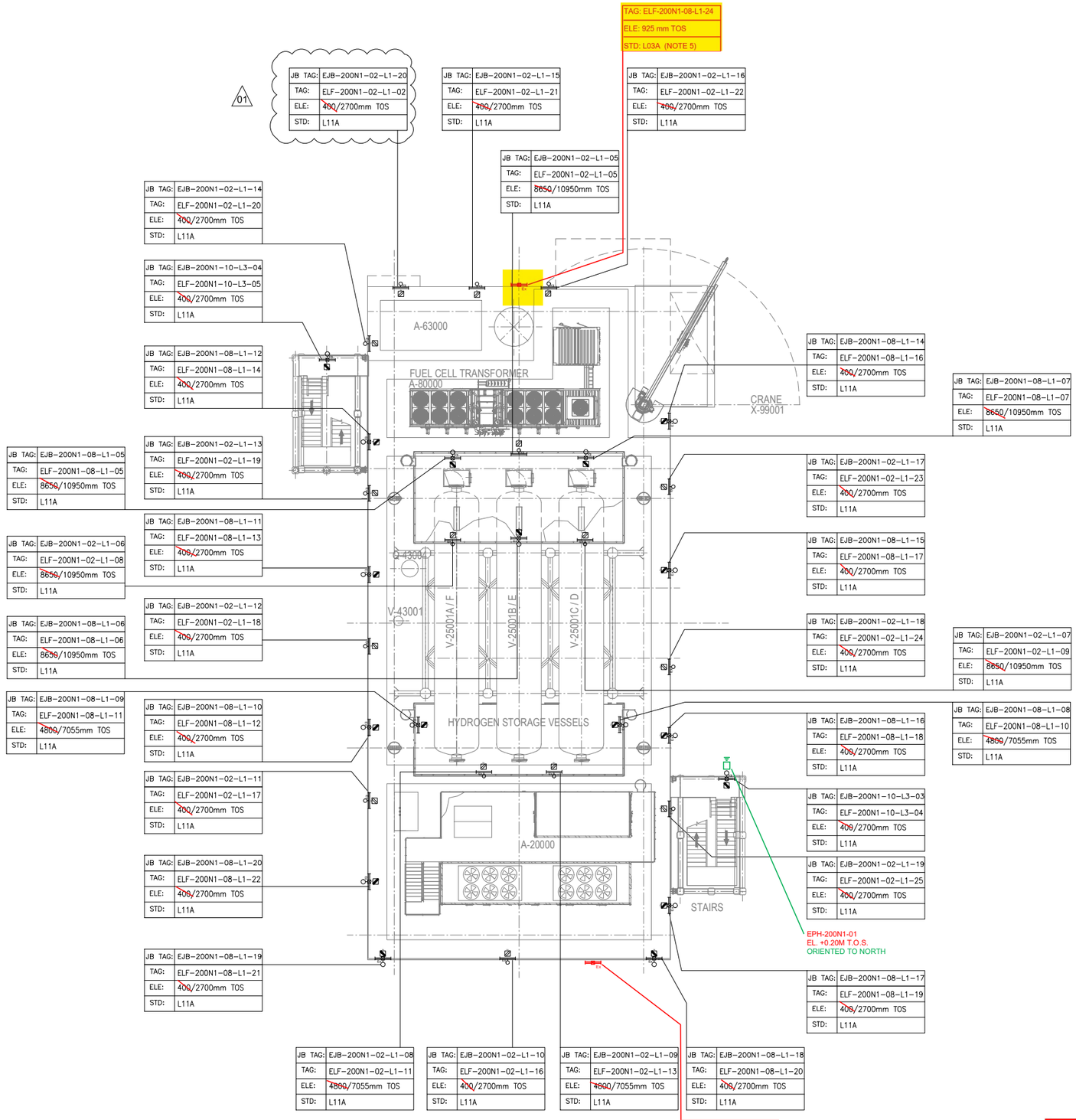
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	PL
4	Check nameplate data is correct.	NA
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	PL
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-17	2025-01-17	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-17T07:46:38.091Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-17T18:26:56:468Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



JB TAG:	EJB-200N1-02-L1-20
TAG:	ELF-200N1-02-L1-02
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-15
TAG:	ELF-200N1-02-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-16
TAG:	ELF-200N1-02-L1-22
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-05
TAG:	ELF-200N1-02-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-14
TAG:	ELF-200N1-02-L1-20
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-04
TAG:	ELF-200N1-10-L3-05
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-12
TAG:	ELF-200N1-08-L1-14
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-14
TAG:	ELF-200N1-08-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-07
TAG:	ELF-200N1-08-L1-07
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-05
TAG:	ELF-200N1-08-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-13
TAG:	ELF-200N1-02-L1-19
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-17
TAG:	ELF-200N1-02-L1-23
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-11
TAG:	ELF-200N1-08-L1-13
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-06
TAG:	ELF-200N1-02-L1-08
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-15
TAG:	ELF-200N1-08-L1-17
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-12
TAG:	ELF-200N1-02-L1-18
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-18
TAG:	ELF-200N1-02-L1-24
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-06
TAG:	ELF-200N1-08-L1-06
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-07
TAG:	ELF-200N1-02-L1-09
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-09
TAG:	ELF-200N1-08-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-10
TAG:	ELF-200N1-08-L1-12
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-16
TAG:	ELF-200N1-08-L1-18
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-08
TAG:	ELF-200N1-08-L1-10
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-11
TAG:	ELF-200N1-02-L1-17
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-03
TAG:	ELF-200N1-10-L3-04
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-20
TAG:	ELF-200N1-08-L1-22
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-19
TAG:	ELF-200N1-02-L1-25
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-19
TAG:	ELF-200N1-08-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-17
TAG:	ELF-200N1-08-L1-19
ELE:	400/2700mm TOS
STD:	L11A

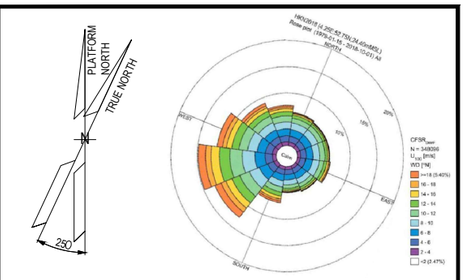
JB TAG:	EJB-200N1-02-L1-08
TAG:	ELF-200N1-02-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-10
TAG:	ELF-200N1-02-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-09
TAG:	ELF-200N1-02-L1-13
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-18
TAG:	ELF-200N1-08-L1-20
ELE:	400/2700mm TOS
STD:	L11A

PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

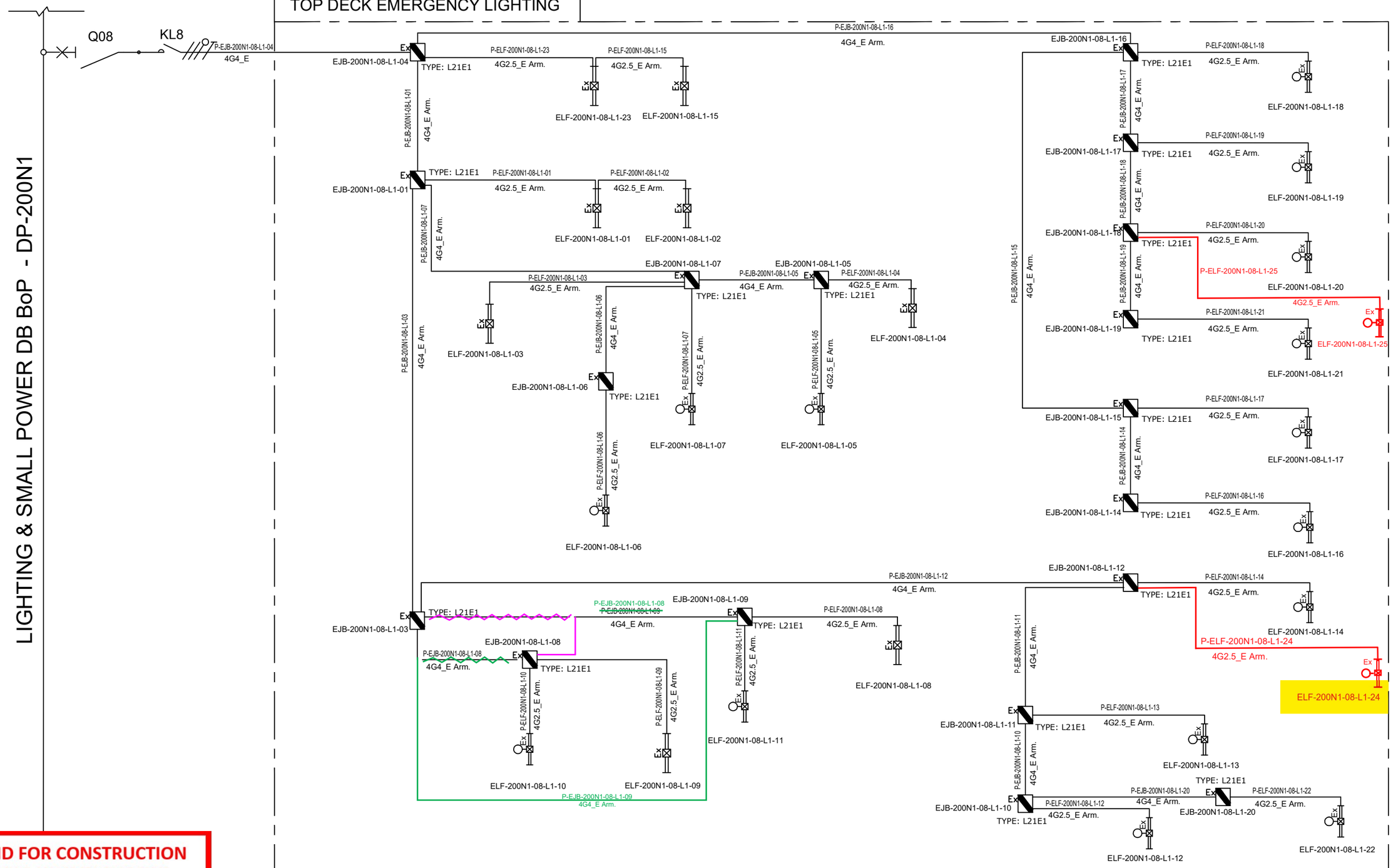
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

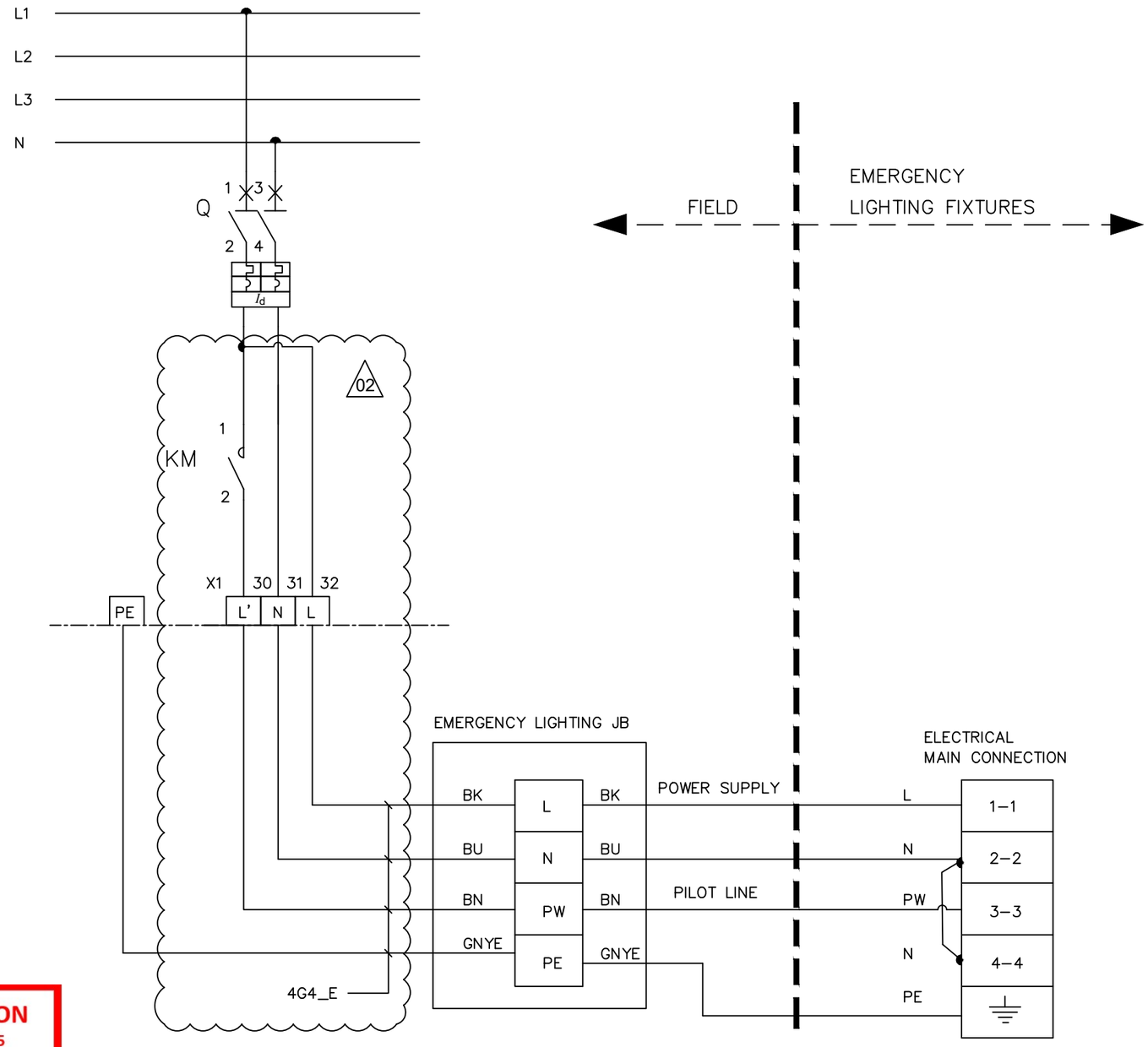
REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz



L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

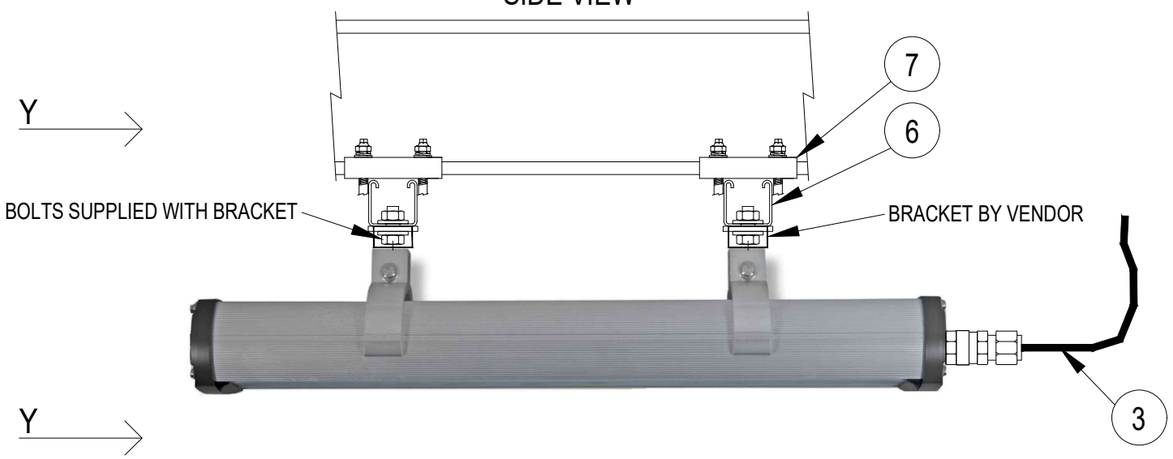
A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

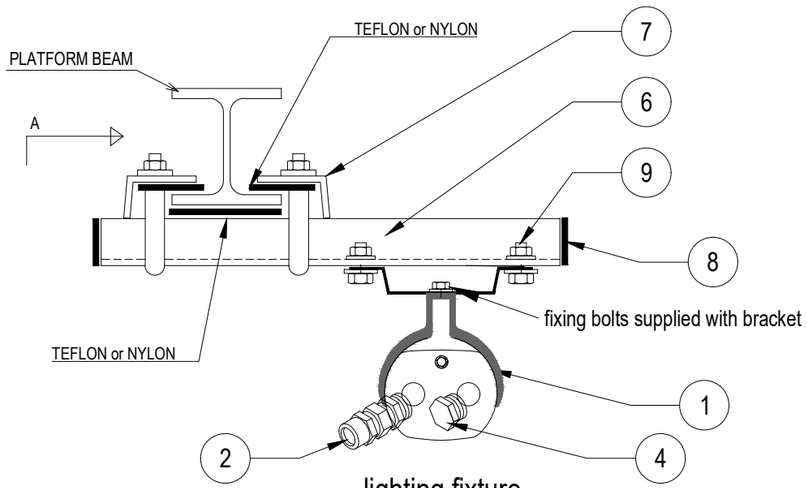
L03A

SIDE VIEW

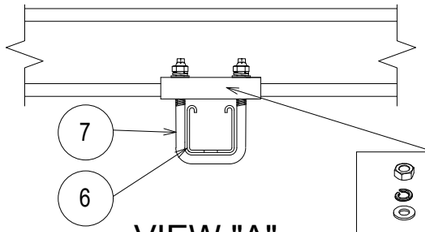


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex e) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		1	NOTE 2 NOTE 5
3	ARMOURED/UNARMOURED CABLE				NOTE 5
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
6	SINGLE U-CHANNEL PERFORATED ON NO.3 SIDE	AISI 316L		AS REQ.	NOTE 1
7	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE	AISI 316L		4	NOTE 4
8	PLUG FOR U-CHANNEL	LPDE		4	
9	HEX. BOLT M8X16 WITH LARGE PLANE WASHER		M8x16	4	

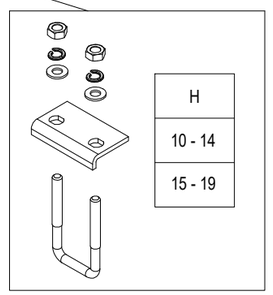
SECTION "Y-Y"



lighting fixture
Cortem LIFEX



VIEW "A"



NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.
5) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
FIXTURE SUSPENSION MOUNTED WITH CLAMPED SUPPORT

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 008 | REV. 02

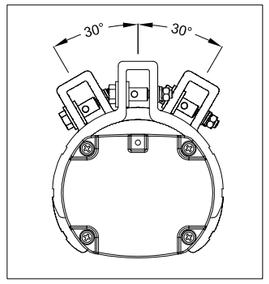
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

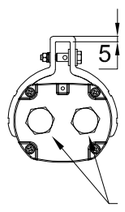
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

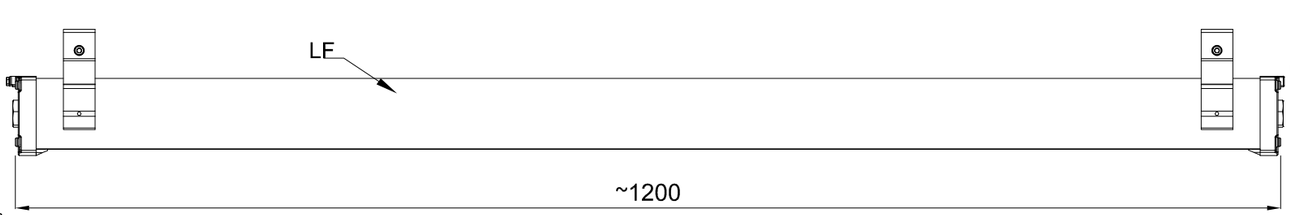
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

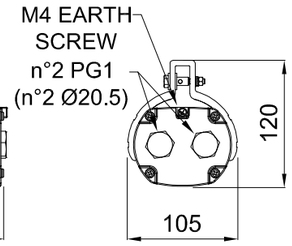


n°2 PG1
(n°2 Ø20.5)

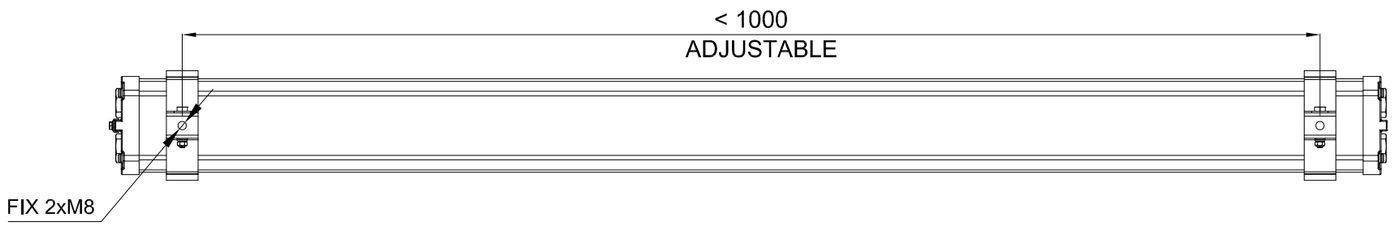
FRONT SIDE



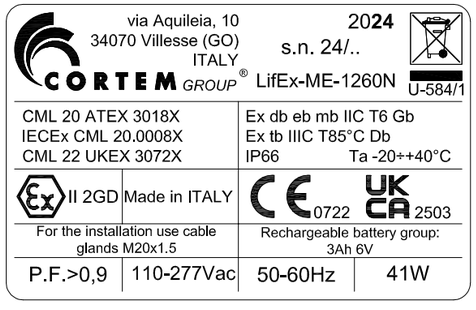
RIGHT SIDE (IN)



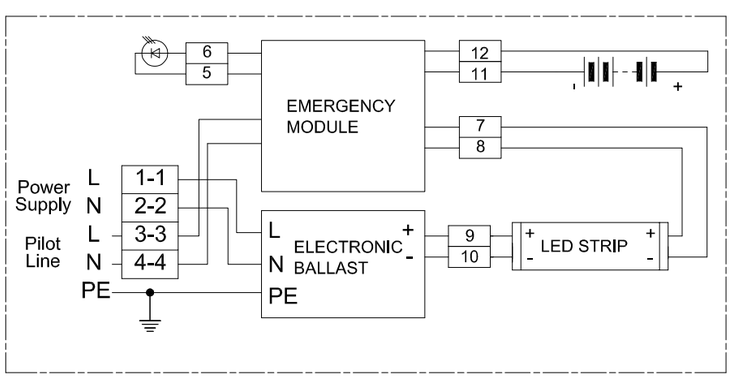
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ITEM	Tag	ELF-200N1-08-L1-25	: Emergency Lighting Fixture			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10004713		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 Miscellaneous Electrical Equipment

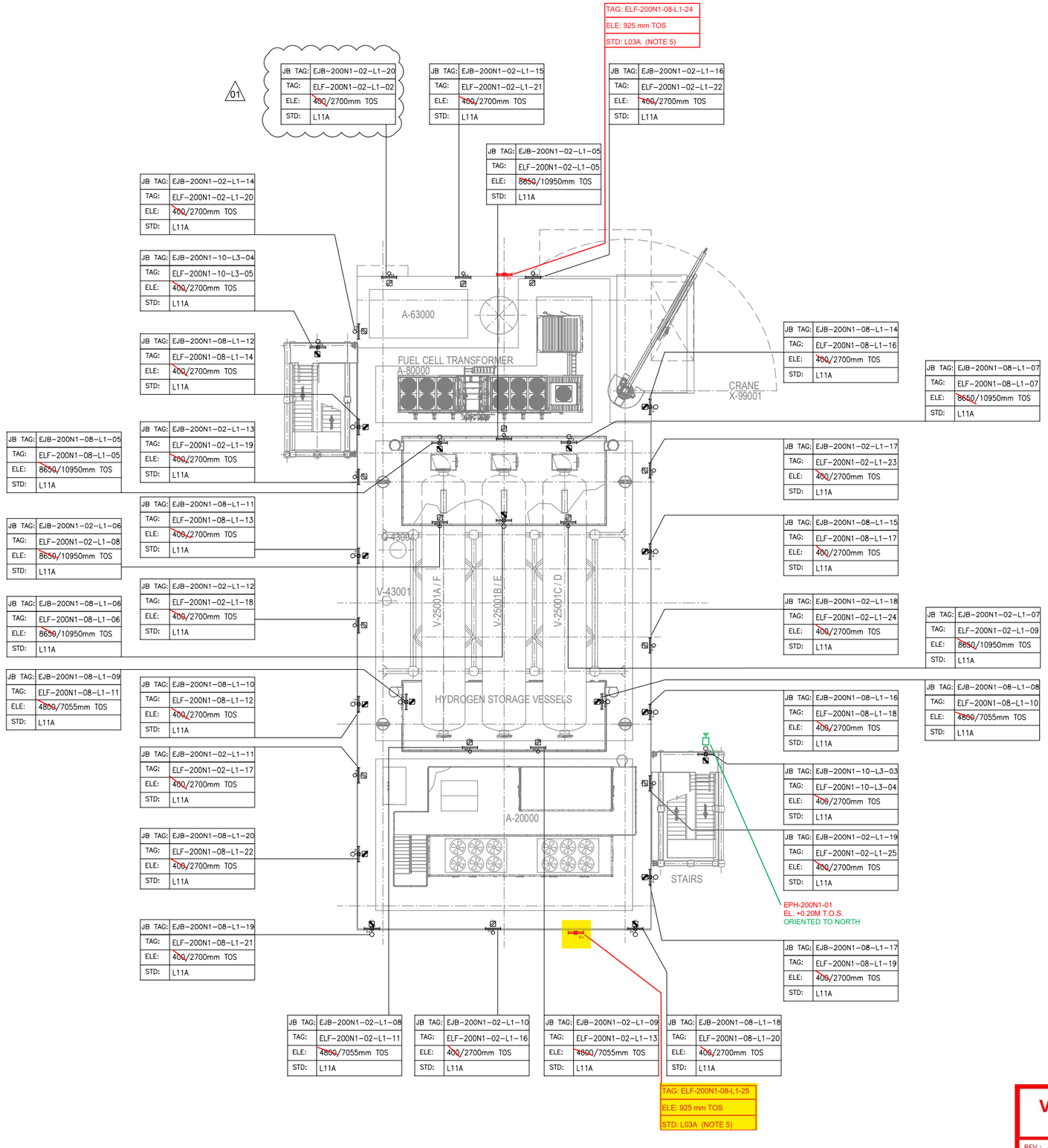
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	PL
4	Check nameplate data is correct.	NA
5	Check all bolts are fitted and all unused entries are suitably plugged.	PL
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

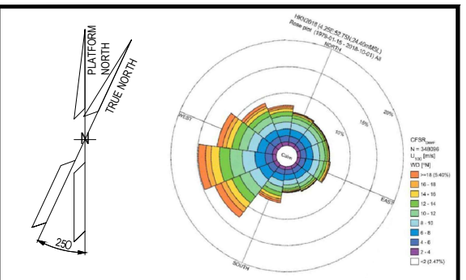
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-17	2025-01-17	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-17T07:46:51.375Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-17T18:27:40.742Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

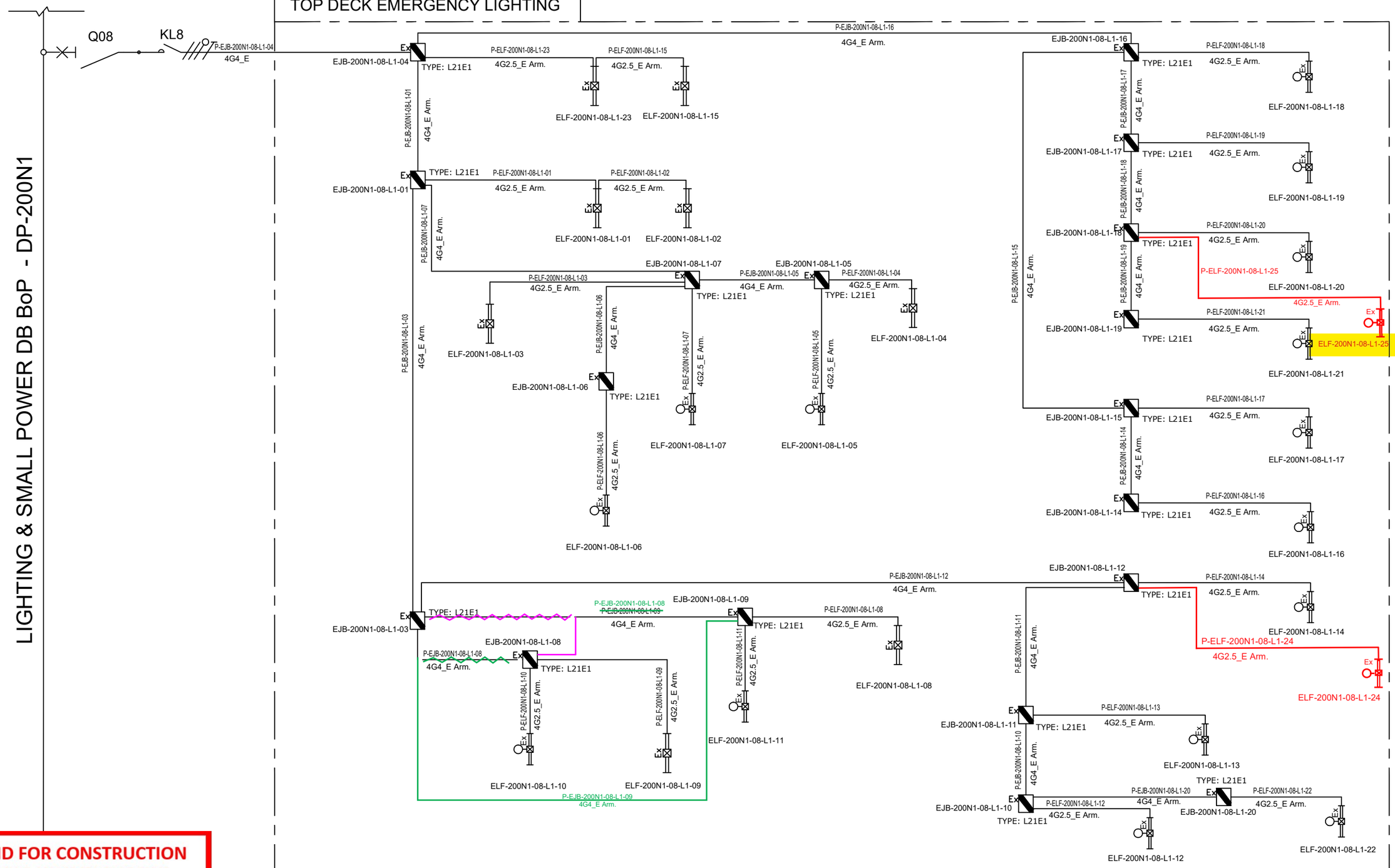
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

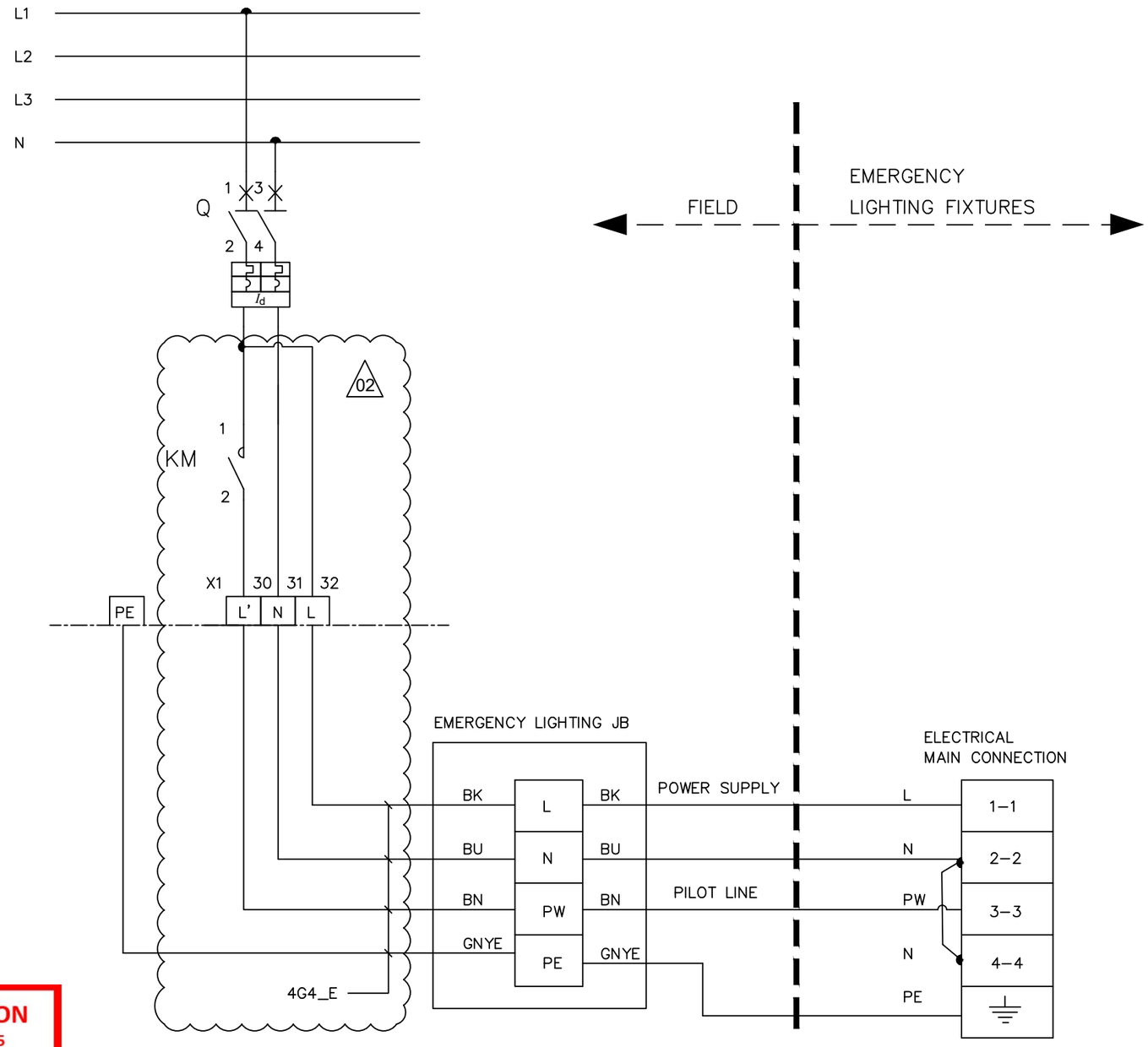
REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz



L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

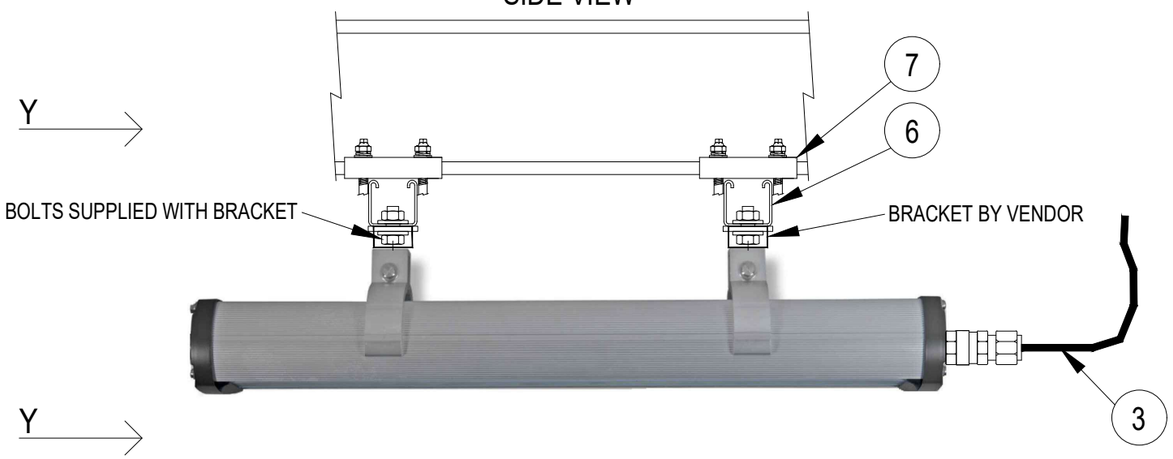
A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

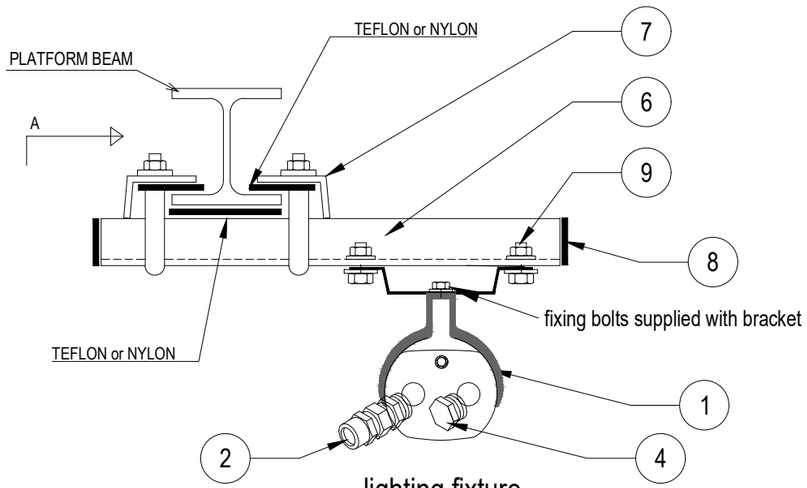
L03A

SIDE VIEW

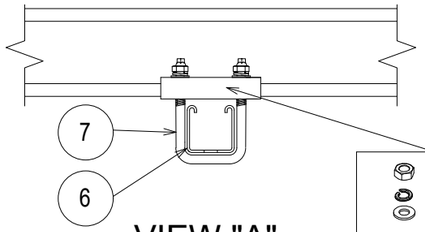


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex e) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		1	NOTE 2 NOTE 5
3	ARMOURED/UNARMOURED CABLE				NOTE 5
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
6	SINGLE U-CHANNEL PERFORATED ON NO.3 SIDE	AISI 316L		AS REQ.	NOTE 1
7	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE	AISI 316L		4	NOTE 4
8	PLUG FOR U-CHANNEL	LPDE		4	
9	HEX. BOLT M8X16 WITH LARGE PLANE WASHER		M8x16	4	

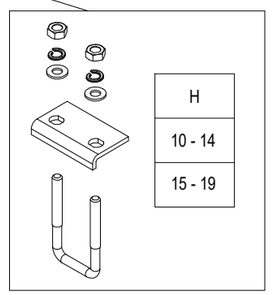
SECTION "Y-Y"



lighting fixture
Cortem LIFEX



VIEW "A"



NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.
5) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
FIXTURE SUSPENSION MOUNTED WITH CLAMPED SUPPORT

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 008 | REV. 02

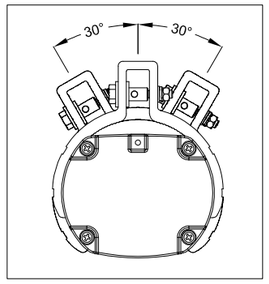
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

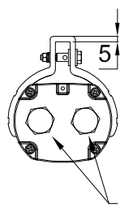
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

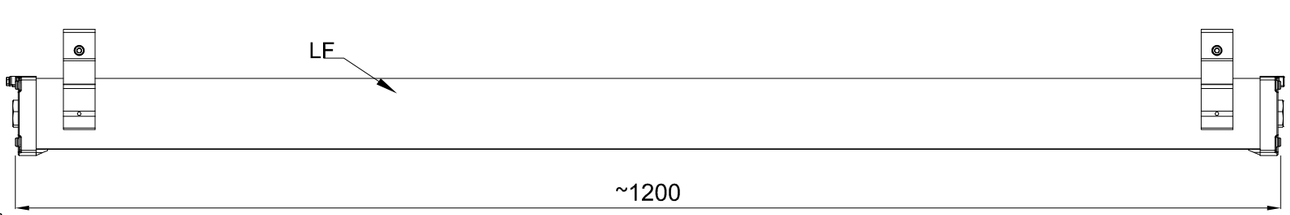
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

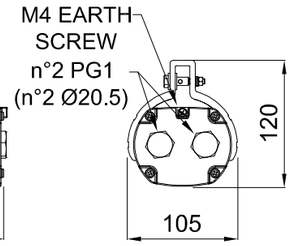


n°2 PG1
(n°2 Ø20.5)

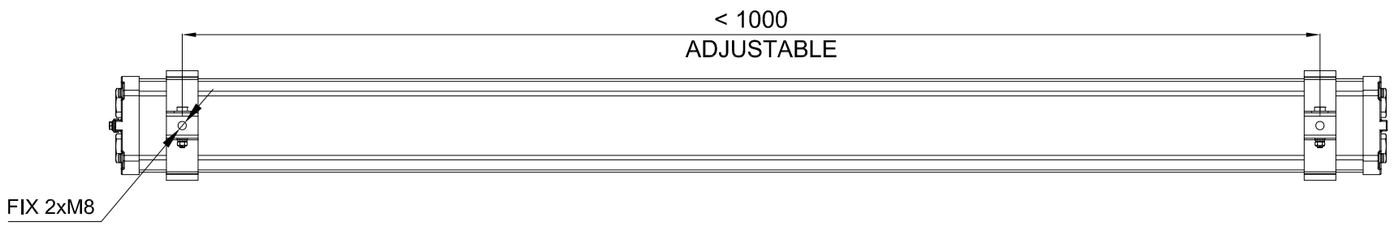
FRONT SIDE



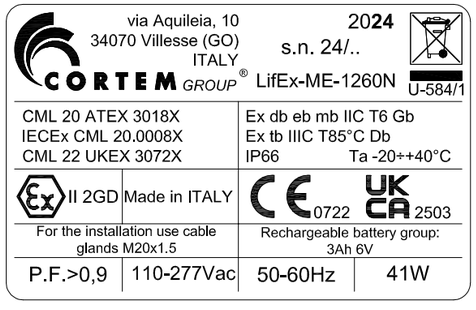
RIGHT SIDE (IN)



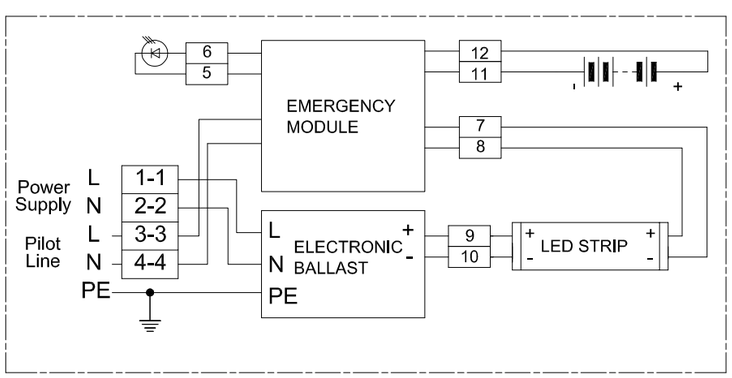
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ITEM	Tag	P-ELF-200N1-08-L1-24	: Emergency Lighting JB/Emergency Lighting Fixture		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10004716	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX09	LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E Color ORANGE

From EJB-200N1-08-L1-12 To ELF-200N1-08-L1-24

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-ELF-200N1-08-L1-24	: Emergency Lighting JB/Emergency Lighting Fixture			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10004716		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED

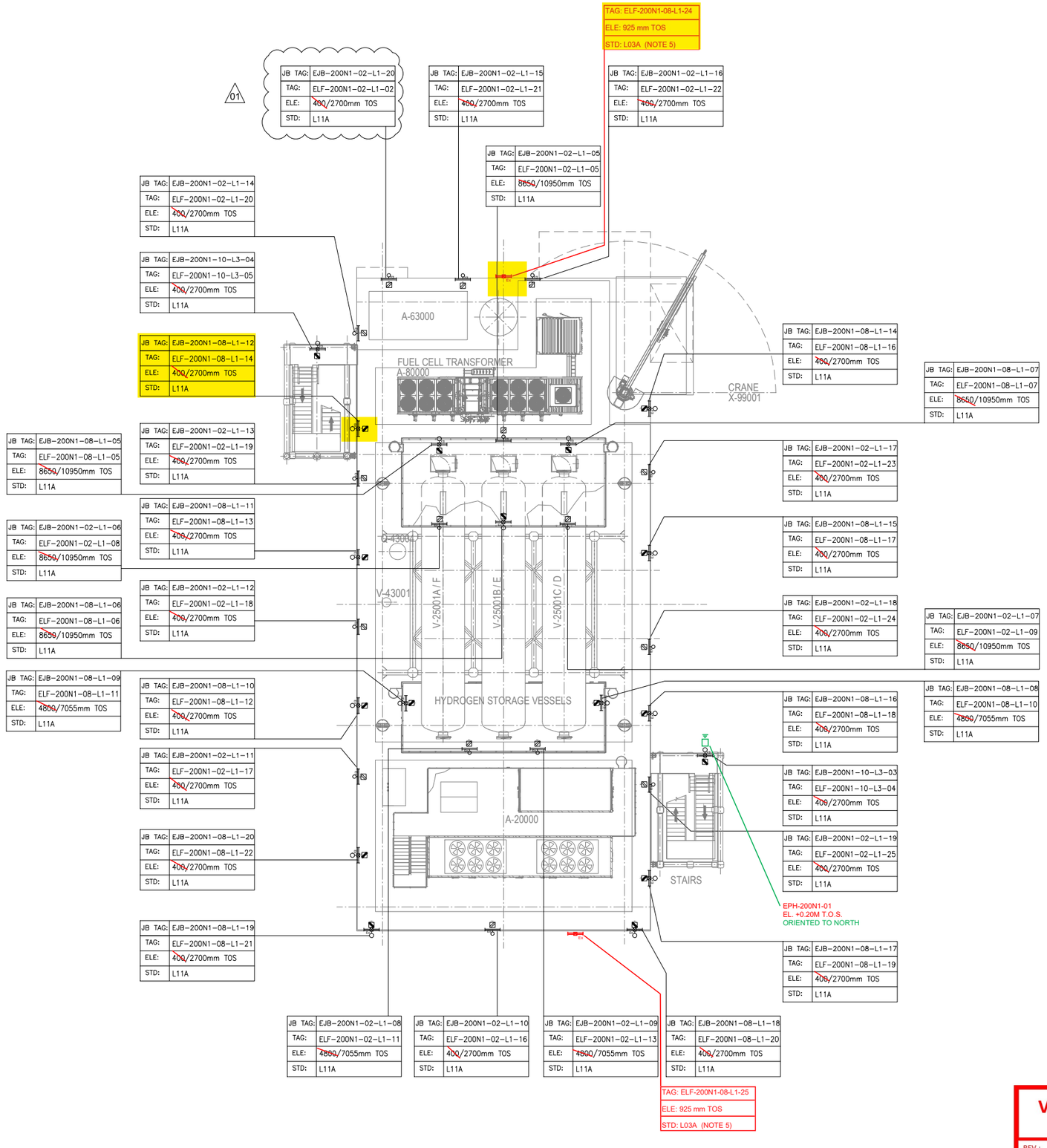
TYPE / SERIAL N° :	MULTIMETRO SIN-STRU-017 S/N:H240103023	TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207
Calibration certificate N° and date:	12/10/2024	Calibration certificate N° and date:	N°7722/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000681

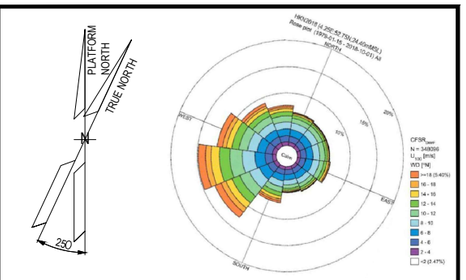
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-17	2025-01-17	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-17T07:47:34.901Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-17T13:47:52.081Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

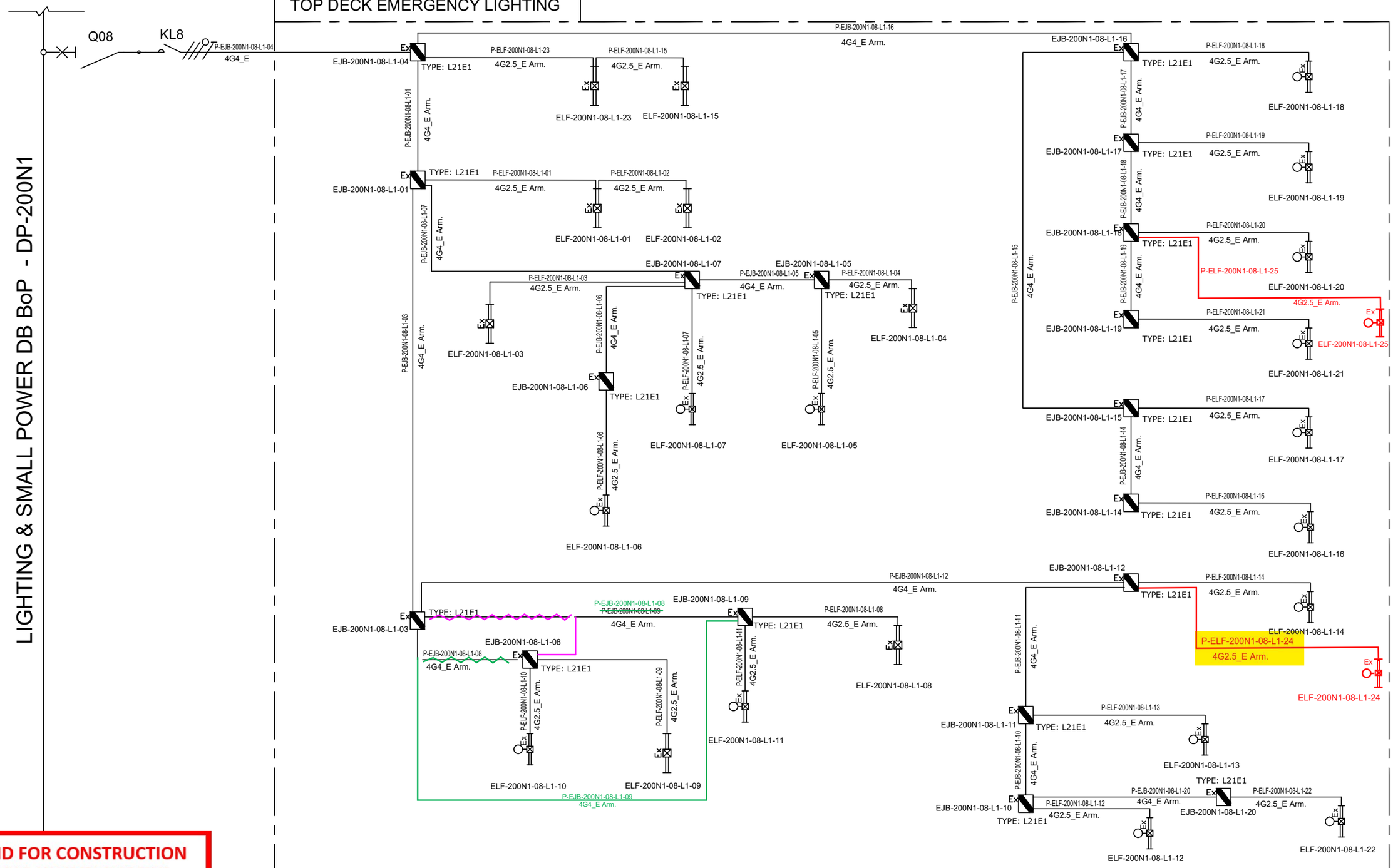
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

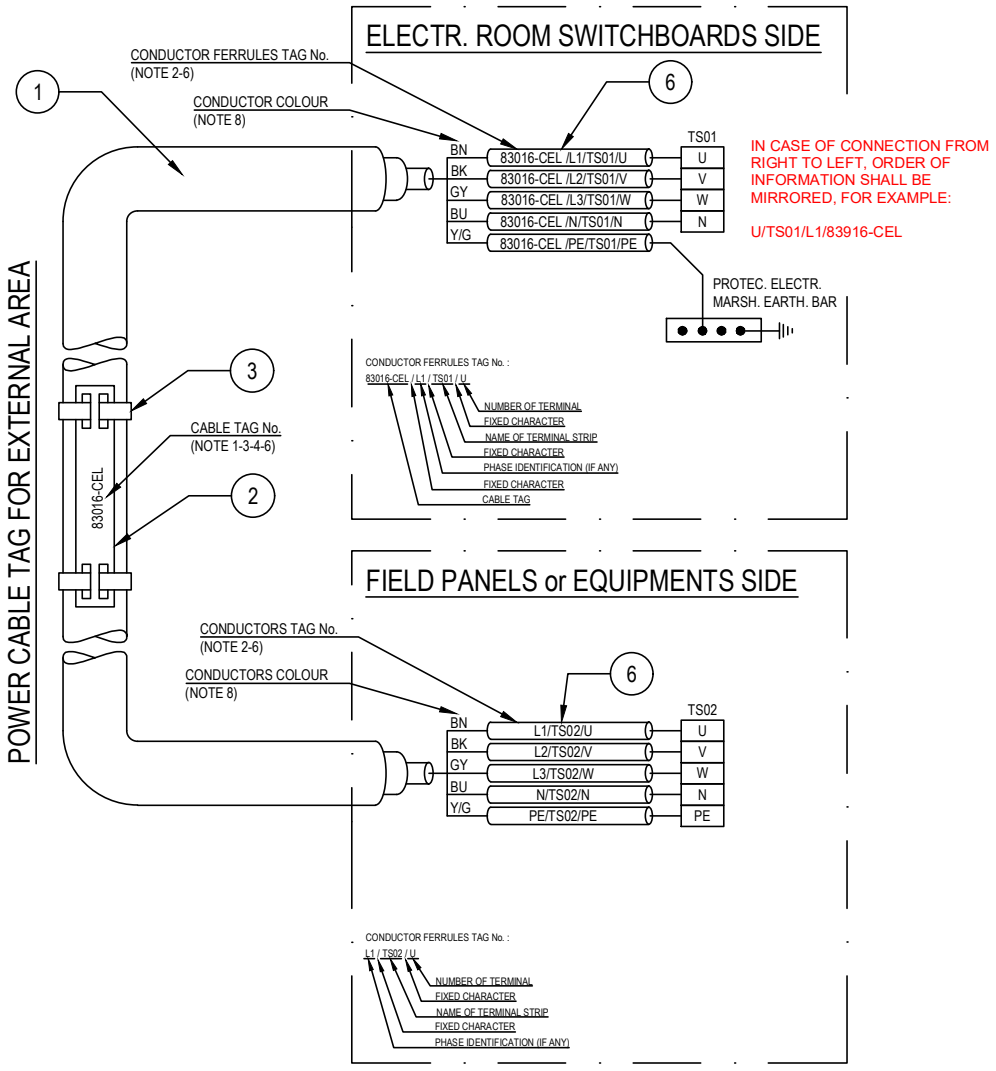
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

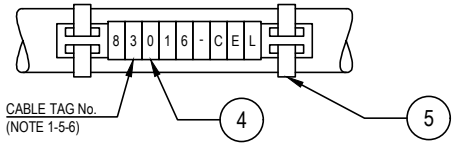
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

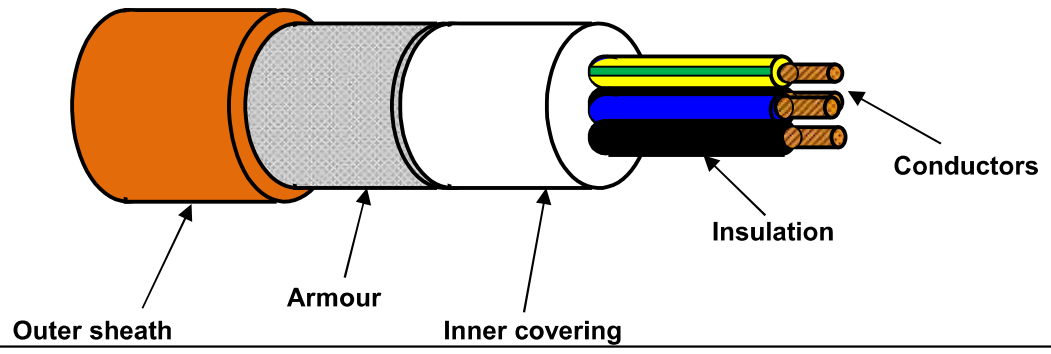
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-24	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-12	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-24	Emergency Lighting Fixture	Upper Deck	Emergency Lighting Fixture for ID Sign Board - NORTH	ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Double				L-150-102-LVT-005

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	P-ELF-200N1-08-L1-25	: Emergency Lighting JB/Emergency Lighting Fixture	Dwg	123A90-DDL-EL-LIS-20148		
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD		
TASK	code	C10004717	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form CPX09	LV Power Cable

CABLE DATA

Type Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH Cores/Size mm² 4G2,5_E Color ORANGE

From EJB-200N1-08-L1-18 To ELF-200N1-08-L1-25

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	NA
8	Confirm cable labelling is in accordance with specifications.	PL
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ITEM	Tag	P-ELF-200N1-08-L1-25	: Emergency Lighting JB/Emergency Lighting Fixture		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10004717	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX09	LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,7	
6		PH 2	0,7	
7		PH 3	0,7	
8	ARMOUR CONTINUITY Ω		0,7	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,7	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

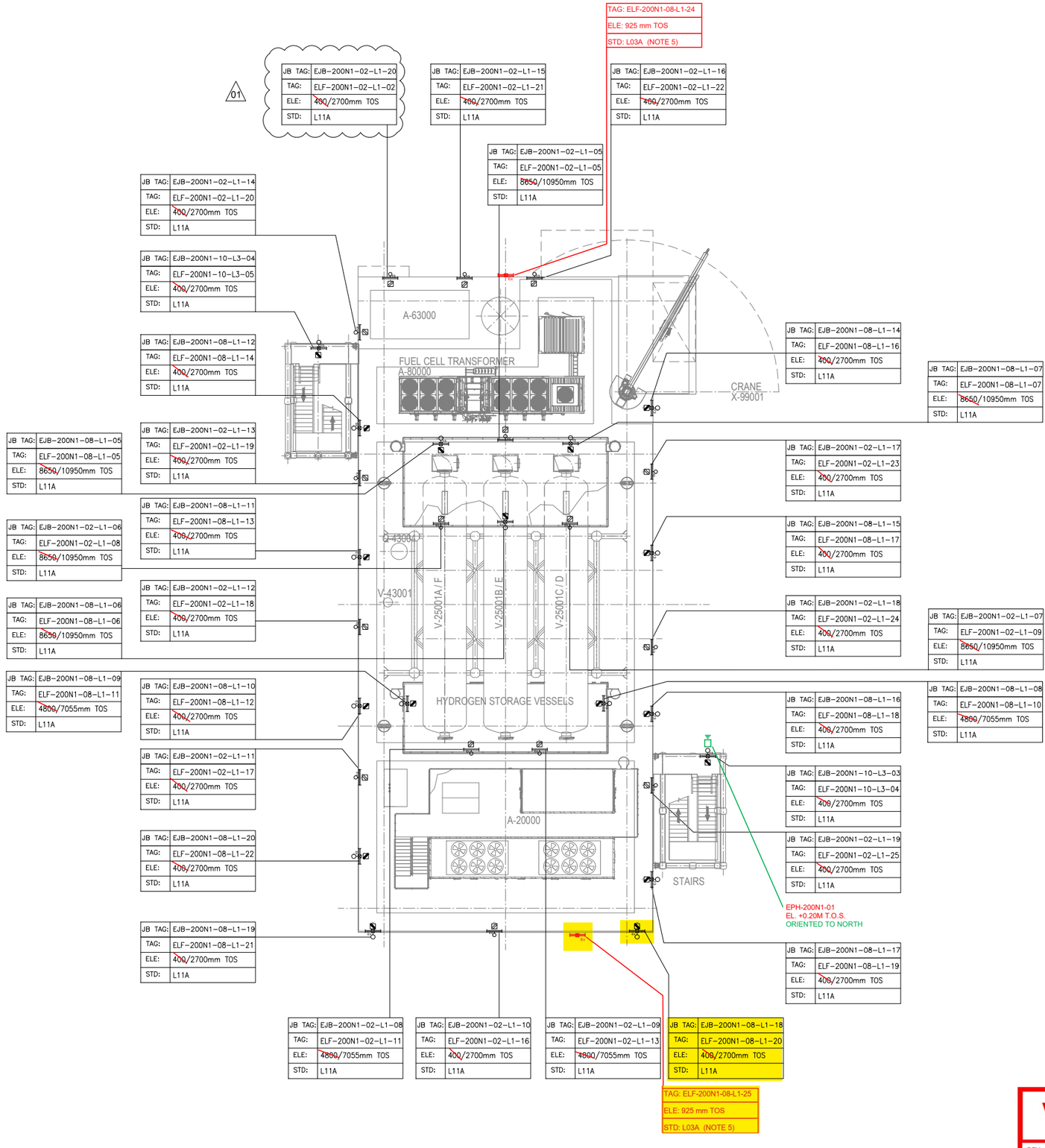
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETRO SIN-STRU-017 S/N:H240103023
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	12/10/2024

Comments: Nota 4: refer to PL C30000681

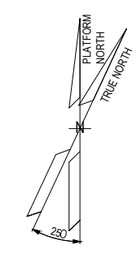
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-17	2025-01-17	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-17T07:48:13.476Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-17T13:48:22.282Z	

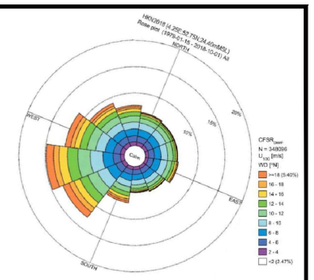
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

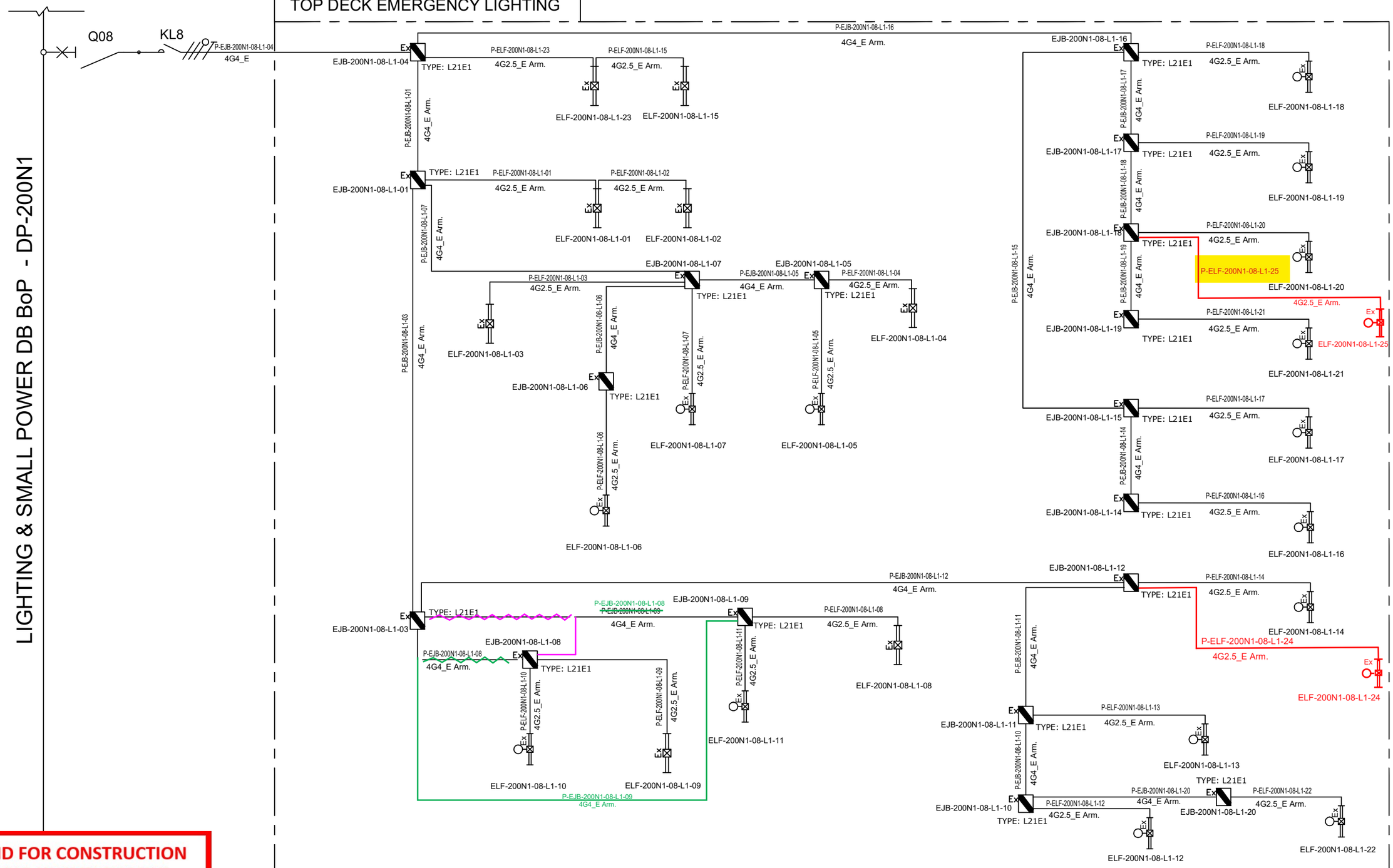
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

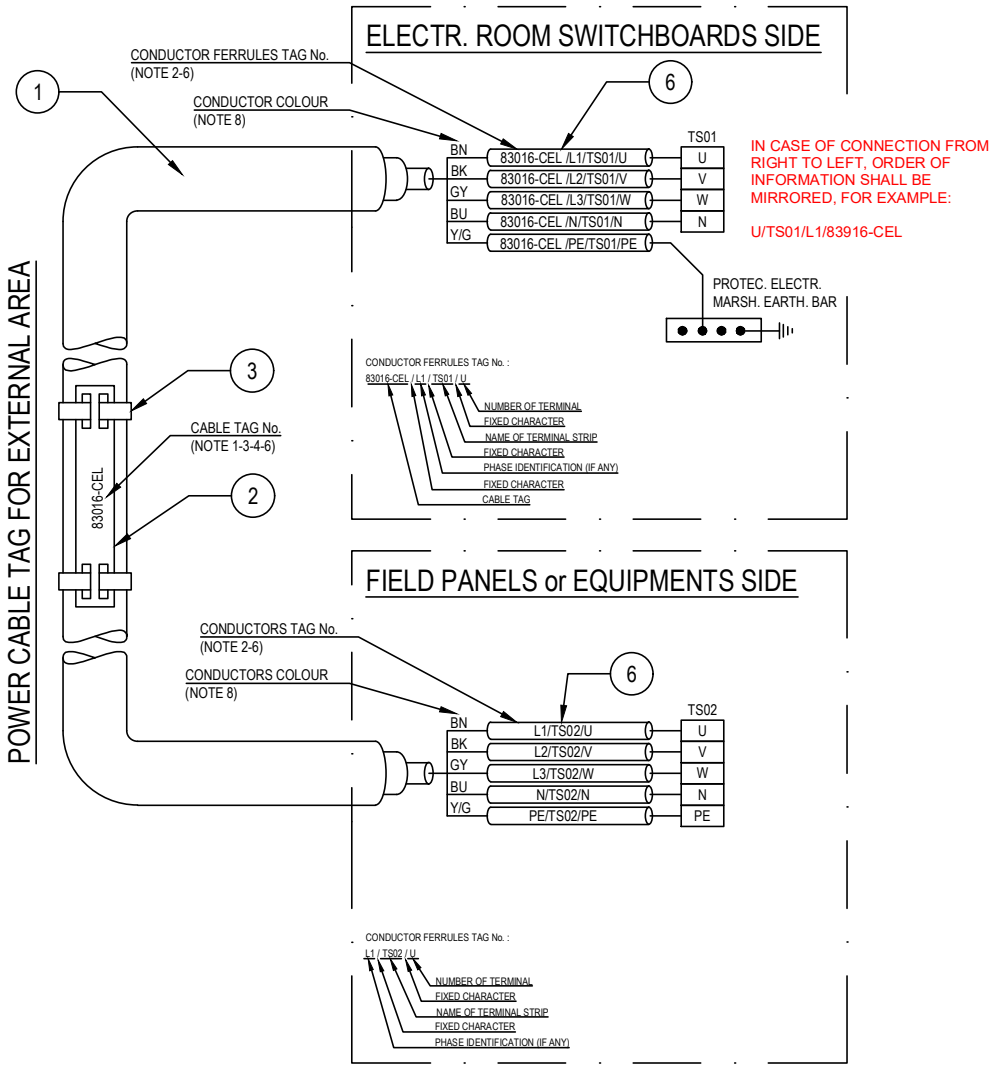
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

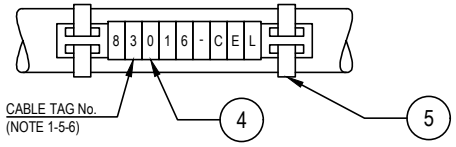
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

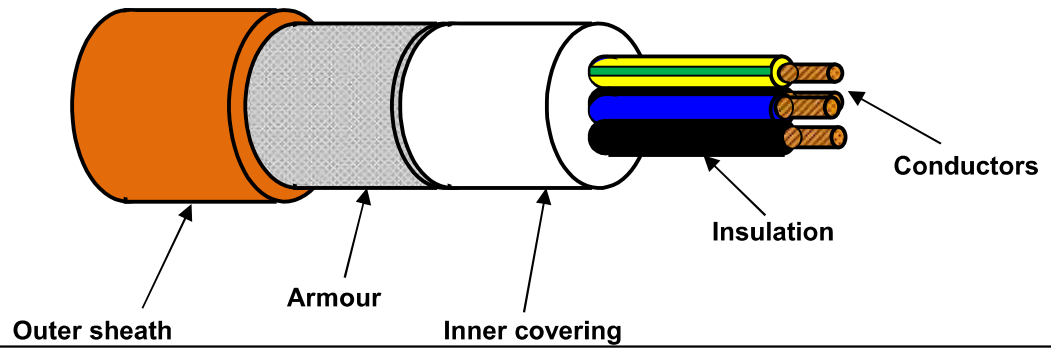
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
P-ELF-200N1-08-L1-25	Cable	LSP	VFC	123A90-DDL-EL-LIS-20148						EJB-200N1-08-L1-18	Emergency Lighting JB	Upper Deck		ELF-200N1-08-L1-25	Emergency Lighting Fixture	Upper Deck	Emergency Lighting Fixture for ID Sign Board - SOUTH	ELECV22-4G2.5_E	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 4G2,5mm²_E - Orange	M20	T2_M20_Double			T2_M20_Double				L-150-102-LVT-004

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

4G2,5_E - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires — IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm
Cores colour code :	**Black - Brown - Blue - Yellow/Green**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not Required
Total Assembling :	Cores layed up with optimal lay length
Overall Wrapping:	Not required
Drain wire :	Not required
Overall Shield:	Not required
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm
Inner covering color code:	**Black or Natural**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60092.360, Average Thickness 1,4 mm
Outer sheath color code:	**Orange**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Under Armour diameter :	(12,8 ± 10%) mm
Over Armour diameter :	(14,0 ± 10%) mm
Outer diameter :	(16,8 ± 10%) mm
Bending radius :	cable outer diameter x 10 (in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)
Conductors DC Resistance :	IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)
Applicable Standards	
Design Guidelines :	**IEC 60092.353**
ON COMPLETE CABLE	
Fire Resistant test :	**IEC 60331.21**
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14:2013 par.9.3.2a
Temperature Range :	
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE	
During Operation :	(-20°C up to +90°C) (in fixed installation)
During installation :	(- 5°C up to +50°C)
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner covering together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 83-35 & process: MC & discipline : Y

ATEX	83-35 Emergency Lighting Upper Deck						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
EJB-200N1-08-L1-01	JB Emergency Lighting Upper Deck - Circuit No. 1	ONSHORE	C10001657	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-03	JB - EMERGENCY LIGHTING	ONSHORE	C10001659	CJX01	100	2025-01-18	RFC 1
EJB-200N1-08-L1-04	JB - EMERGENCY LIGHTING	ONSHORE	C10001297	CJX01	100	2025-01-23	RFC 1
EJB-200N1-08-L1-05	JB - EMERGENCY LIGHTING	ONSHORE	C10001638	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-06	JB - EMERGENCY LIGHTING	ONSHORE	C10001639	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-07	JB - EMERGENCY LIGHTING	ONSHORE	C10001641	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-08	JB - EMERGENCY LIGHTING	ONSHORE	C10001640	CJX01	100	2025-01-20	RFC 1
EJB-200N1-08-L1-09	JB - EMERGENCY LIGHTING	ONSHORE	C10001642	CJX01	100	2025-01-18	RFC 1
EJB-200N1-08-L1-10	JB - EMERGENCY LIGHTING	ONSHORE	C10001643	CJX01	100	2025-01-23	RFC 1
EJB-200N1-08-L1-11	JB - EMERGENCY LIGHTING	ONSHORE	C10001644	CJX01	100	2025-01-16	RFC 1
EJB-200N1-08-L1-12	JB - EMERGENCY LIGHTING	ONSHORE	C10001645	CJX01	100	2025-01-23	RFC 1
EJB-200N1-08-L1-14	JB - EMERGENCY LIGHTING	ONSHORE	C10001271	CJX01	100	2025-01-16	RFC 1
EJB-200N1-08-L1-15	JB - EMERGENCY LIGHTING	ONSHORE	C10001646	CJX01	100	2025-01-16	RFC 1
EJB-200N1-08-L1-16	JB - EMERGENCY LIGHTING	ONSHORE	C10001647	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-01	EMERGENCY LIGHT	ONSHORE	C10001677	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-02	EMERGENCY LIGHT	ONSHORE	C10001678	CJX01	100	2025-01-14	RFC 1
ELF-200N1-08-L1-03	EMERGENCY LIGHT	ONSHORE	C10001679	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-04	EMERGENCY LIGHT	ONSHORE	C10001680	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-05	EMERGENCY LIGHT	ONSHORE	C10001681	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-06	EMERGENCY LIGHT	ONSHORE	C10001682	CJX01	100	2025-01-15	RFC 1
ELF-200N1-08-L1-07	EMERGENCY LIGHT	ONSHORE	C10001683	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-08	EMERGENCY LIGHT	ONSHORE	C10001684	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-09	EMERGENCY LIGHT	ONSHORE	C10001685	CJX01	100	2025-01-16	RFC 1
ELF-200N1-08-L1-10	EMERGENCY LIGHT	ONSHORE	C10001686	CJX01	100	2025-01-18	RFC 1
ELF-200N1-08-L1-11	EMERGENCY LIGHT	ONSHORE	C10001687	CJX01	100	2025-01-18	RFC 1
ELF-200N1-08-L1-12	EMERGENCY LIGHT	ONSHORE	C10001688	CJX01	100	2025-01-22	RFC 1
ELF-200N1-08-L1-13	EMERGENCY LIGHT	ONSHORE	C10001689	CJX01	100	2025-01-02	RFC 1
ELF-200N1-08-L1-14	EMERGENCY LIGHT	ONSHORE	C10001690	CJX01	100	2024-12-31	RFC 1
ELF-200N1-08-L1-15	EMERGENCY LIGHT	ONSHORE	C10001392	CJX01	100	2025-01-16	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 83-35 & process: MC & discipline : Y

ATEX	83-35 Emergency Lighting Upper Deck						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
ELF-200N1-08-L1-16	EMERGENCY LIGHT	ONSHORE	C10001393	CJX01	100	2024-12-31	RFC 1
ELF-200N1-08-L1-17	EMERGENCY LIGHT	ONSHORE	C10001691	CJX01	100	2025-01-22	RFC 1
ELF-200N1-08-L1-18	EMERGENCY LIGHT	ONSHORE	C10001692	CJX01	100	2024-12-31	RFC 1

ITEM	Tag	EJB-200N1-08-L1-14	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001271		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990017			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-FIDI 21 0015 X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-14	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001271		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	EJB-200N1-08-L1-14	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001271	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

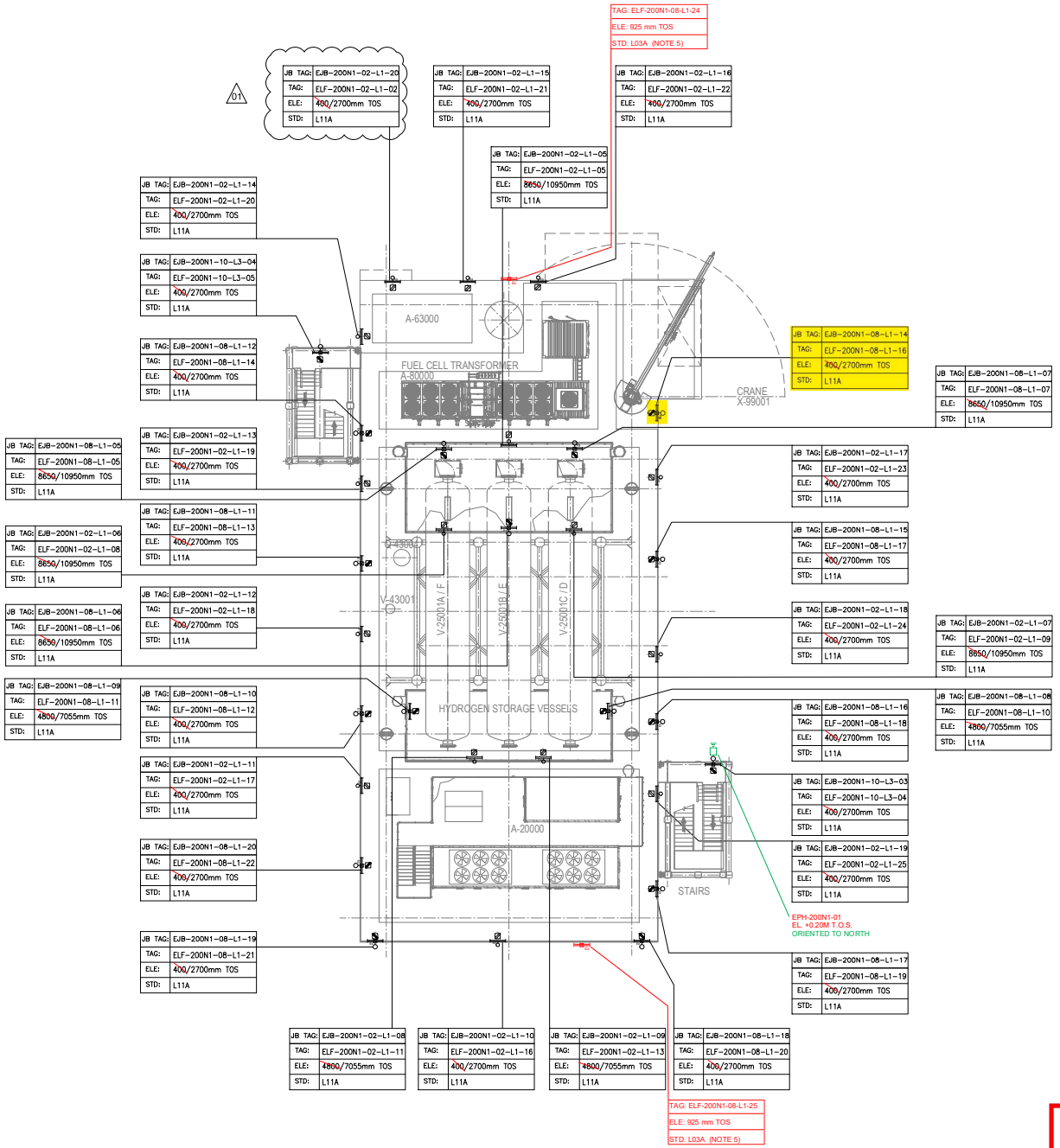
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

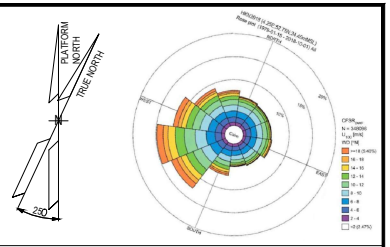
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:24:17.574Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-16T07:45:52.529Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. → EJB-200N1-08-L1-01

EJB-200N1-08-L1-01 — TYPE: L21E1
- P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
- P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm. → EJB-200N1-08-L1-07

EJB-200N1-08-L1-07 — TYPE: L21E1
- P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
- P-EJB-200N1-08-L1-06 — 4G4_E Arm. → EJB-200N1-08-L1-06
- P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
- P-EJB-200N1-08-L1-05 — 4G4_E Arm. → EJB-200N1-08-L1-05

EJB-200N1-08-L1-05 — TYPE: L21E1
- P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
- P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

EJB-200N1-08-L1-06 — TYPE: L21E1
- P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

EJB-200N1-08-L1-16 — TYPE: L21E1
- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm.

EJB-200N1-08-L1-17 — TYPE: L21E1
- P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
- P-EJB-200N1-08-L1-18 — 4G4_E Arm.

EJB-200N1-08-L1-18 — TYPE: L21E1
- P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
- P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25
- P-EJB-200N1-08-L1-19 — 4G4_E Arm.

EJB-200N1-08-L1-19 — TYPE: L21E1
- P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
- P-EJB-200N1-08-L1-15 — 4G4_E Arm.

EJB-200N1-08-L1-15 — TYPE: L21E1
- P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
- P-EJB-200N1-08-L1-14 — 4G4_E Arm.

EJB-200N1-08-L1-14 — TYPE: L21E1
- P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

P-EJB-200N1-08-L1-12 — 4G4_E Arm.

EJB-200N1-08-L1-12 — TYPE: L21E1
- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

EJB-200N1-08-L1-03 — TYPE: L21E1 — P-EJB-200N1-08-L1-09 — 4G4_E Arm.

EJB-200N1-08-L1-09 — TYPE: L21E1
- P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
- P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11

EJB-200N1-08-L1-08 — TYPE: L21E1
- P-EJB-200N1-08-L1-08 — 4G4_E Arm.
- P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
- P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09

EJB-200N1-08-L1-11 — TYPE: L21E1
- P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
- P-EJB-200N1-08-L1-10 — 4G4_E Arm.

EJB-200N1-08-L1-10 — TYPE: L21E1
- P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12
- P-EJB-200N1-08-L1-20 — 4G4_E Arm.

EJB-200N1-08-L1-20 — TYPE: L21E1
- P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DG-20125 | SHEET 011 | REV. 01

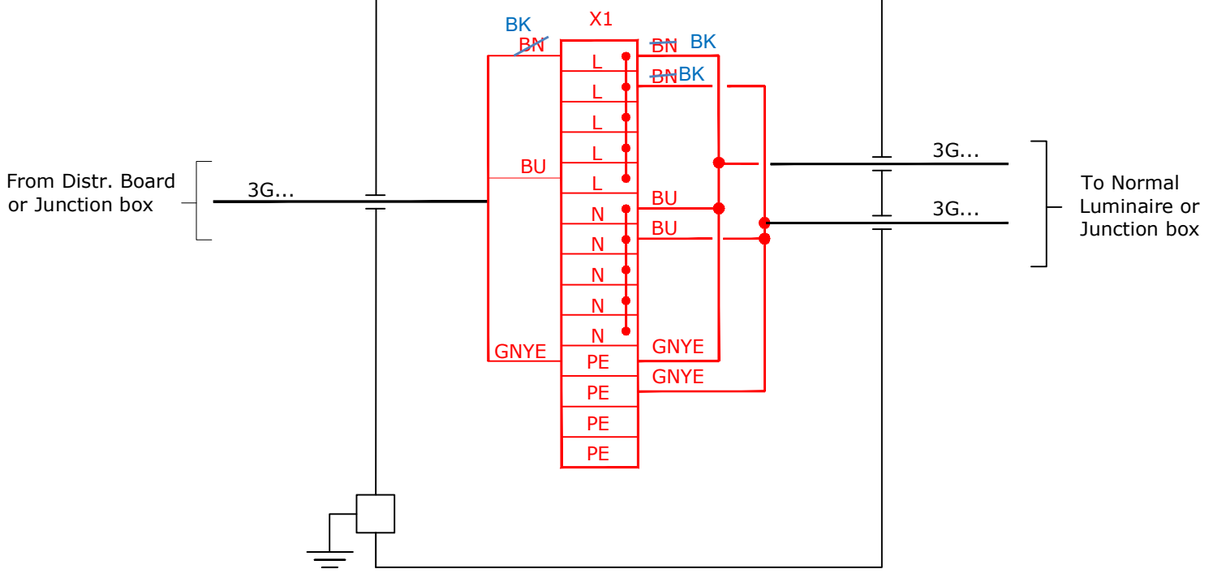
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

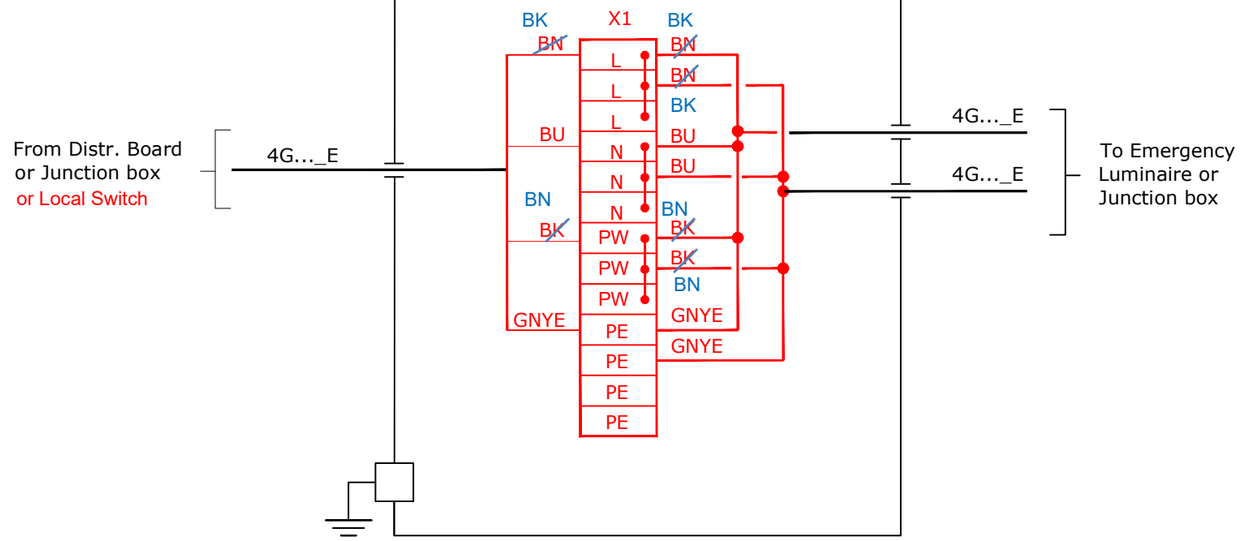
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

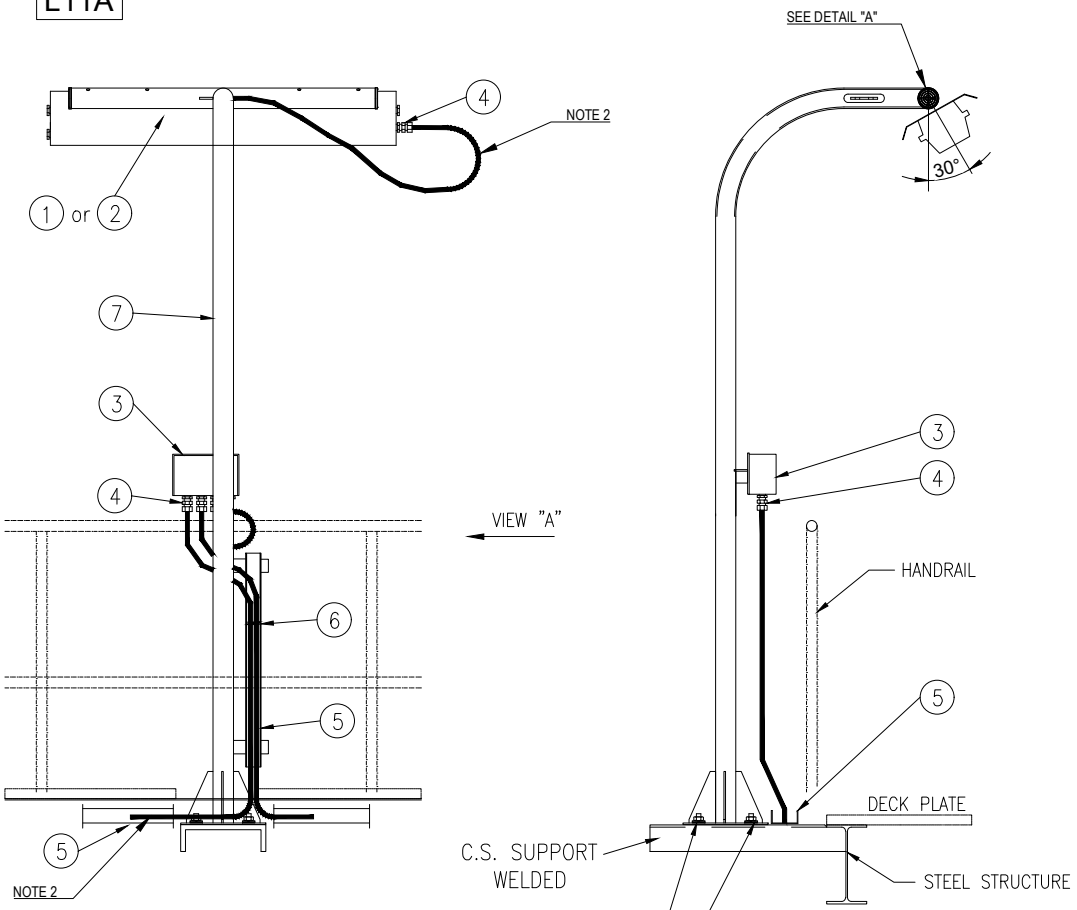
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

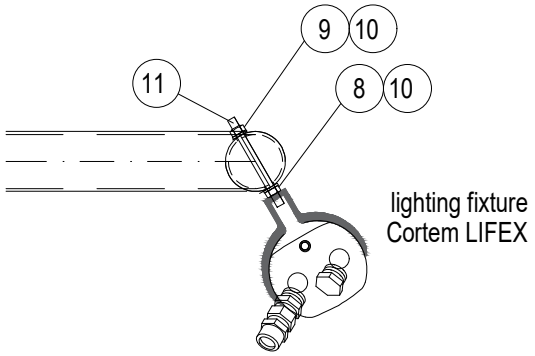
File Name : 123A90-DDL-EL-DG-20125

L11A



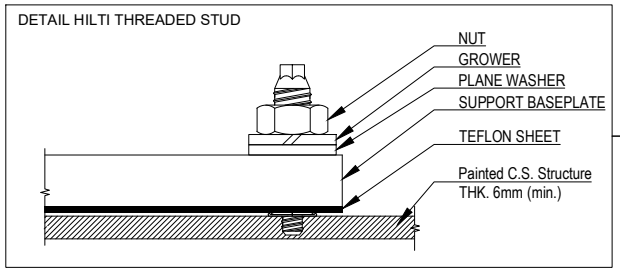
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

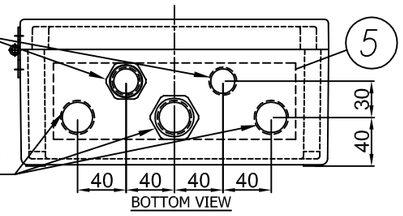
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

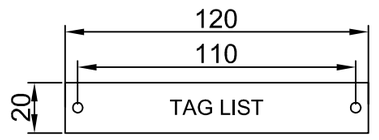
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

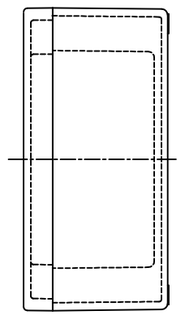
A002MAX

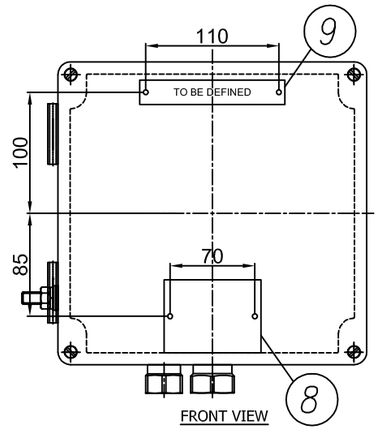
(9) PLATE DETAIL



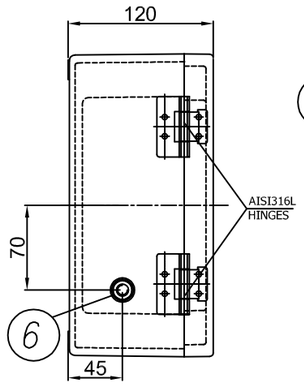
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

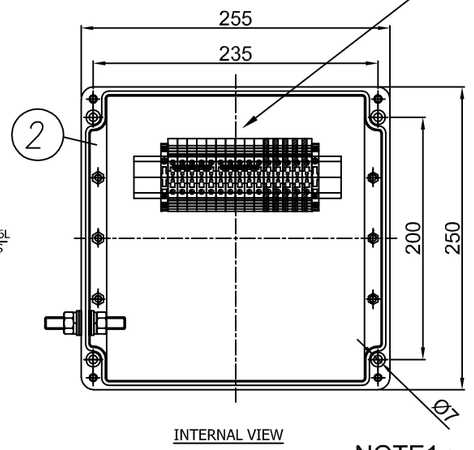

RIGHT VIEW



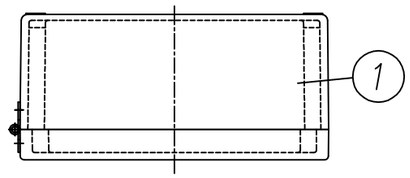
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

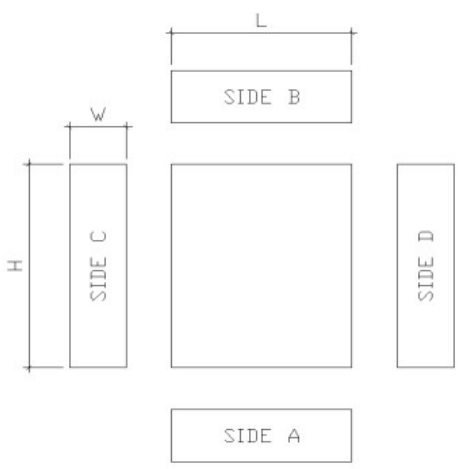
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

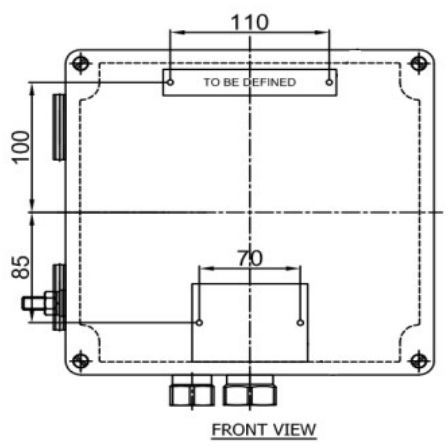
File Name : 1724001481-EL-DA-00003 Rev. 01

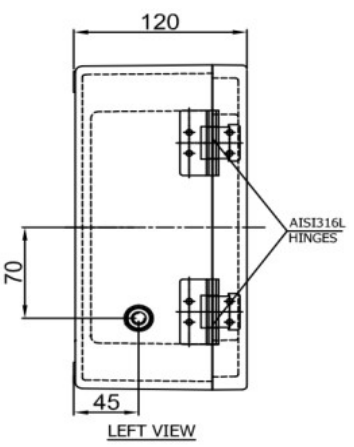
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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This certificate may only be reproduced in its entirety, without any change, schedule included

[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx FIDI 21.0015X**	Page 1 of 4	Certificate history: Issue 0 (2022-02-18)
Status:	**Current**	Issue No: 1	
Date of Issue:	2023-05-04		

Applicant: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Equipment: **Junction boxes, local control stations and local control panels**

Optional accessory: Model reference: AQ-***P / AQ-***AL / AR-***P / AR-***AL / AQ-***P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT / SB-*** / ST-*** / EFE-*** / EFXE-*** AL/ EFXE-***SB / EFXE-***ST / EFE-***-HT / EFXE-***AL-HT

Type of Protection: **Flameproof enclosure 'db'; Intrinsic safety 'ia/ib'; Increased safety 'eb'; Encapsulation 'mb', Protection by enclosure 'tb'**

Marking: **Ex ia IIC/IIB T6...T4 Ga**(2) or

Ex db eb ia/ib mb [(3)] IIC/IIB T6...T4 Gb(1) or

Ex eb IIC/IIB T6...T4 Gb(1) or

Ex tb IIIC T85°C...T135°C Db

(1) Others type of protection additional to Ex e/eb depending to the components actually mounted.

(2) In case of enclosures containing Ex e/Ex eb terminals and/or Ex ia Ga already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Approved for issue on behalf of the IECEx Certification Body: **Marino Kelava**

Position: **Certification Signatory**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Fiditas Ltd
Slavka Tomerlina 44
HR-10361 Zagreb-Sesvete
Croatia

Fiditas
explosion safety solutions

IECEx Certificate of Conformity

Certificate No.: **IECEx FIDI 21.0015X**

Date of issue: 2023-05-04 Issue No: 1

Manufacturer: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

HR/FIDI/ExTR21.0016/00 HR/FIDI/ExTR21.0016/01

Quality Assessment Report:

FR/INE/QAR08.0002/15

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Junction boxes, local control stations and local control panels series AQ-…..; AR-…..; SB…..; EFE-…..; EFXE-….. use certified enclosures of various sizes, manufactured by Technor Italsmea S.p.A., type: AQ-.... ; AR-....; SB-...; ST- …, certificate IECEx FIDI 21.0012U.

Enclosures coded …-HT are made in glass fiber reinforced polyester resin or in aluminum, and covered by IECEx component certificates: IECEx PTB 08.0003U, enclosure type: 26.****** and IECEx PTB 08.0003U, enclosure type: 25.******.

Enclosures may be equipped with certified Ex equipment or Ex components and Ex terminals listed in manufacturer's documentation. Certified Ex equipment or Ex components and Ex terminals must be used according to data available in related component or equipment certificates, in particular relevant temperature range, voltage and current limitations. The cable glands or plugs, with separate IECEx certificate, made in type of protection ‘eb’ and/or ‘tb’ with appropriate IP protection are mounted according to related manufacturer’s installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

For other description see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Enclosures marked with warning label: “WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS” must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to IEC 60079-14.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
New IECEx certified Ex products added in the Apparatus list according to list given in HR/FIDI/ ExTR 21.0016/01.

Annex:

IECEx FIDI 21.0015X Technor Equipment Annex1 issue1.pdf

Technical description (continued from original certificate)

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
	(5)	Material **SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C to +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP55, IP66 or IP67 depending on model

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

Models sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

Power dissipation – HT aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

Power dissipation – Aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series of enclosure. Exact values are given in manufacturer's documentation.

Warning labels:

WARNING – DO NOT OPEN WHEN ENERGIZED (*)
(*) Not mandatory for apparatus with protection type Ex ia Ga and Ex ib Gb.

WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

To be added when the enclosures or parts of them have a surface resistance more than 10^9 Ω or 10^{11} Ω according to IEC 60079-0 Clause 7.4.2 a), as applicable, and as per following cases:

- are equipped with transparent parts made of polycarbonate.
- for category II 2 G / EPL Gb Gas group IIC: are painted and the paint layer thickness is > 0.2mm.
- for category II 2 G / EPL Gb Gas group IIB: are painted and the paint layer thickness is > 2mm.
- for category II 2 D / EPL Db: are painted and the paint layer thickness is > 2mm.
- for category II 2 G / EPL Gb Gas group IIC: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 2000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 8000mm^2.
- for category II 2 G /EPL Gb Gas group IIB: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 10000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 40000mm^2.

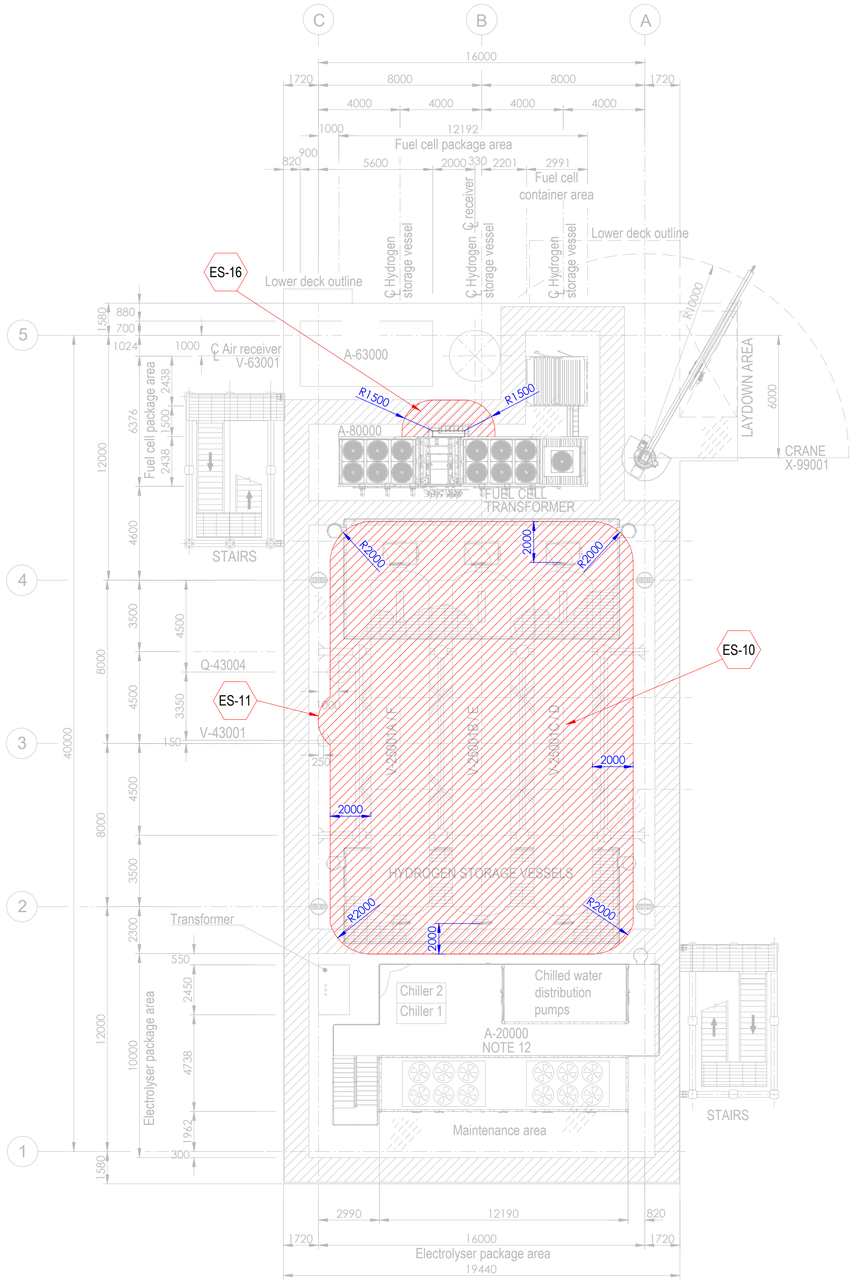
OPEN THE VALVE ONLY WHEN THE APPARATUS IS DE-ENERGIZED AND ONLY WHEN AN EXPLOSIVE DUST ATMOSPHERE IS NOT PRESENT
To be added on Ex tb apparatus equipped with the drain / venting device ECR3.

Other warnings depend on the components actually mounted, according to the component manufacturer's documentation.

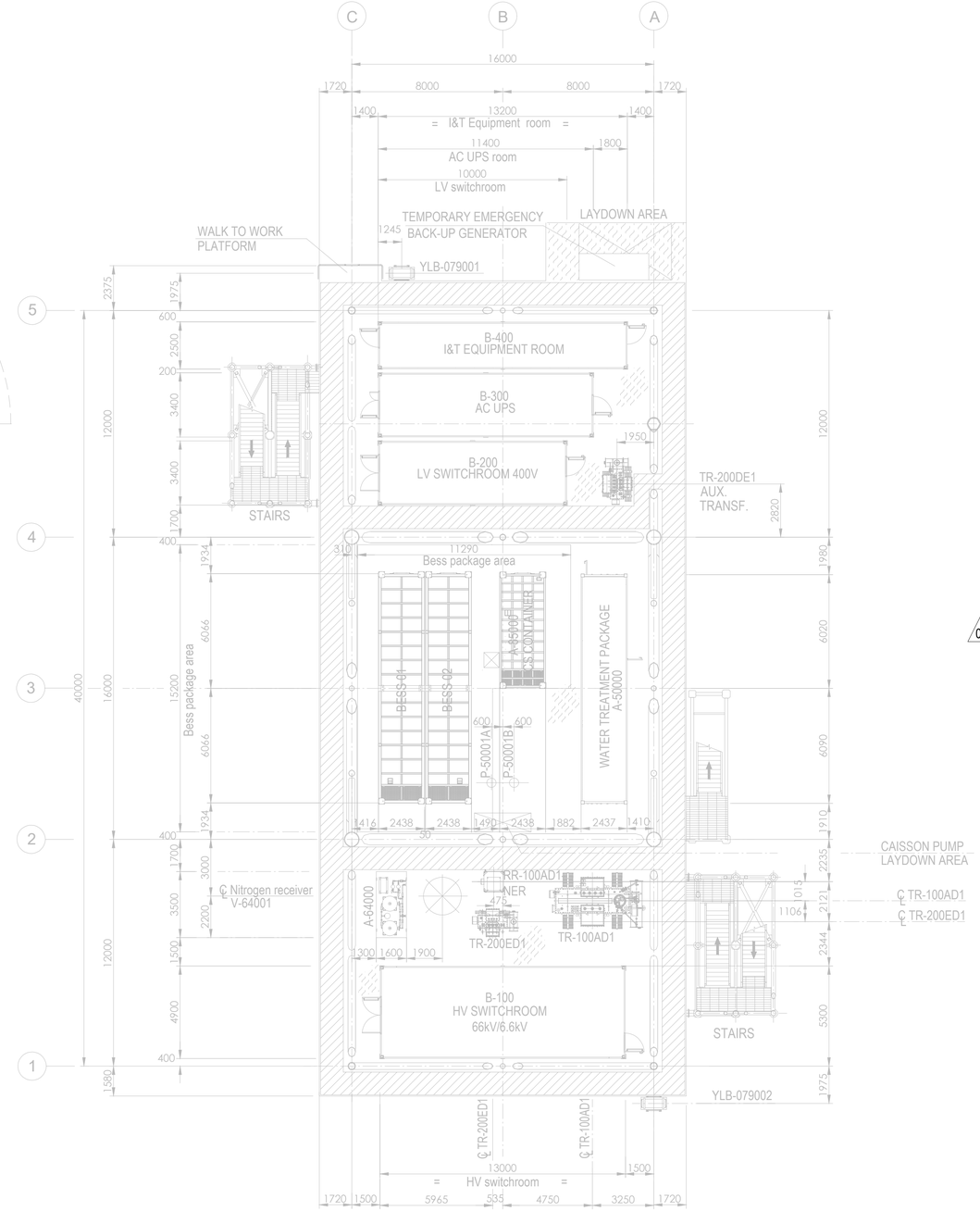
The tables below state the maximum power dissipation values (W) related to the internal temperature (Tint) and ambient temperature (Tamb).

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



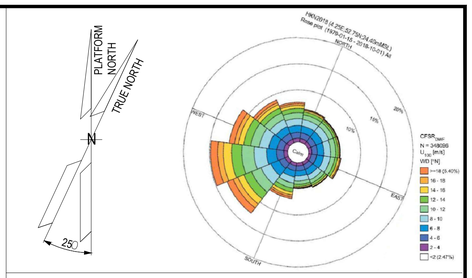
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

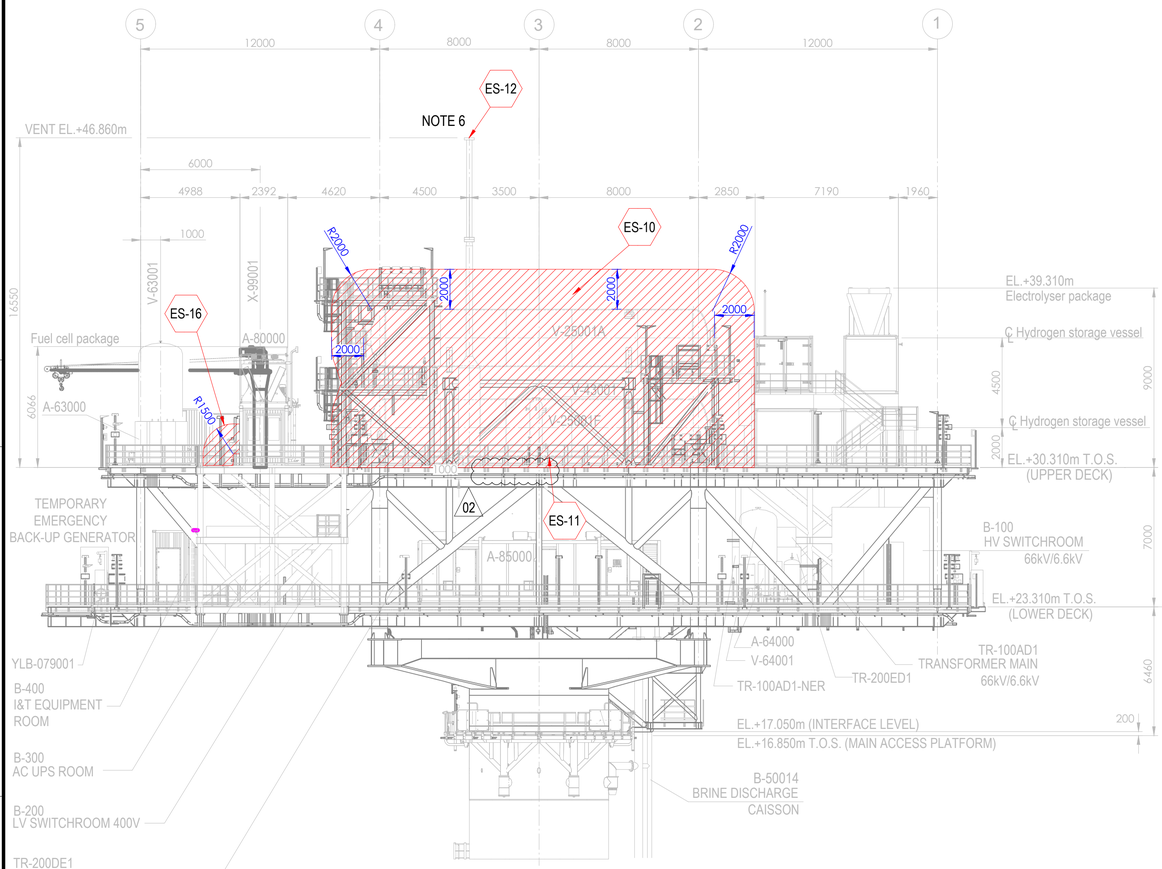
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

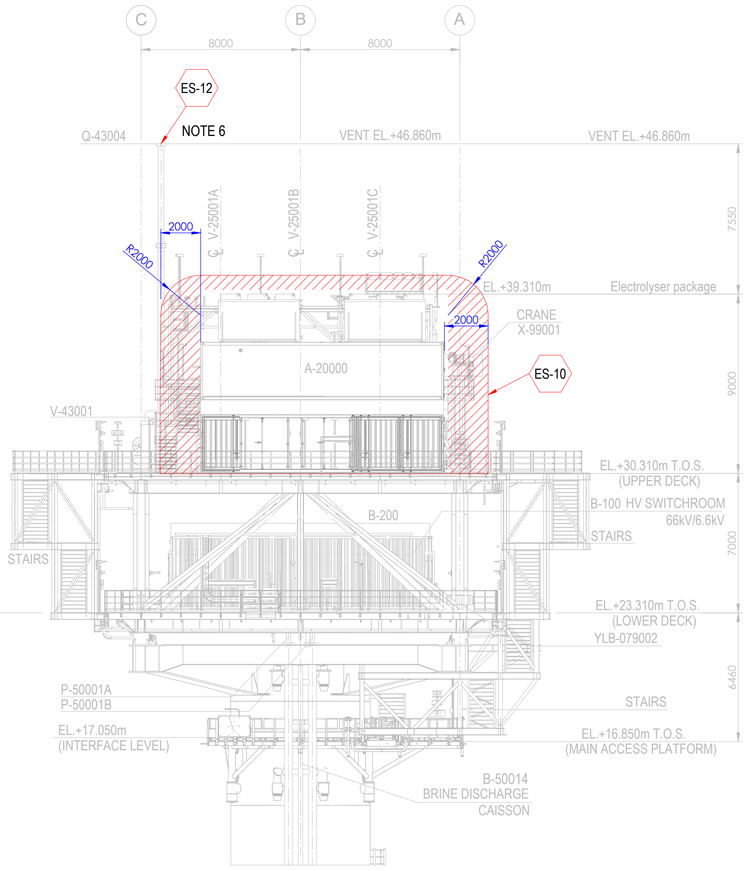
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

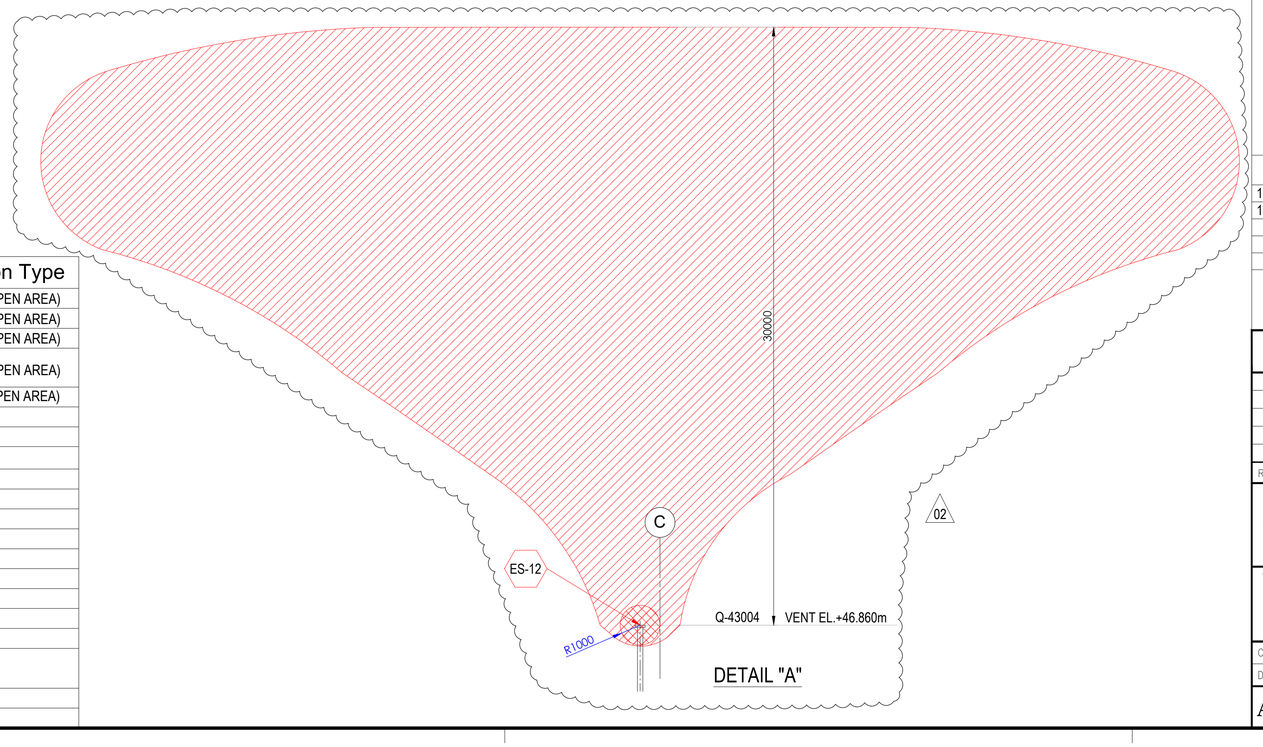


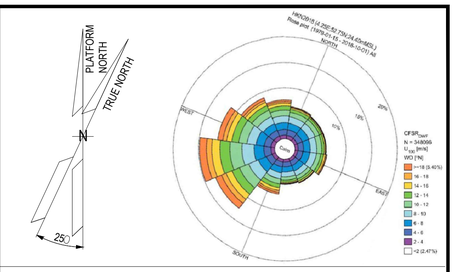
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-04	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001297	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990008			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-FIDI 21 0015 X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-04	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001297		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	EJB-200N1-08-L1-04	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001297	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

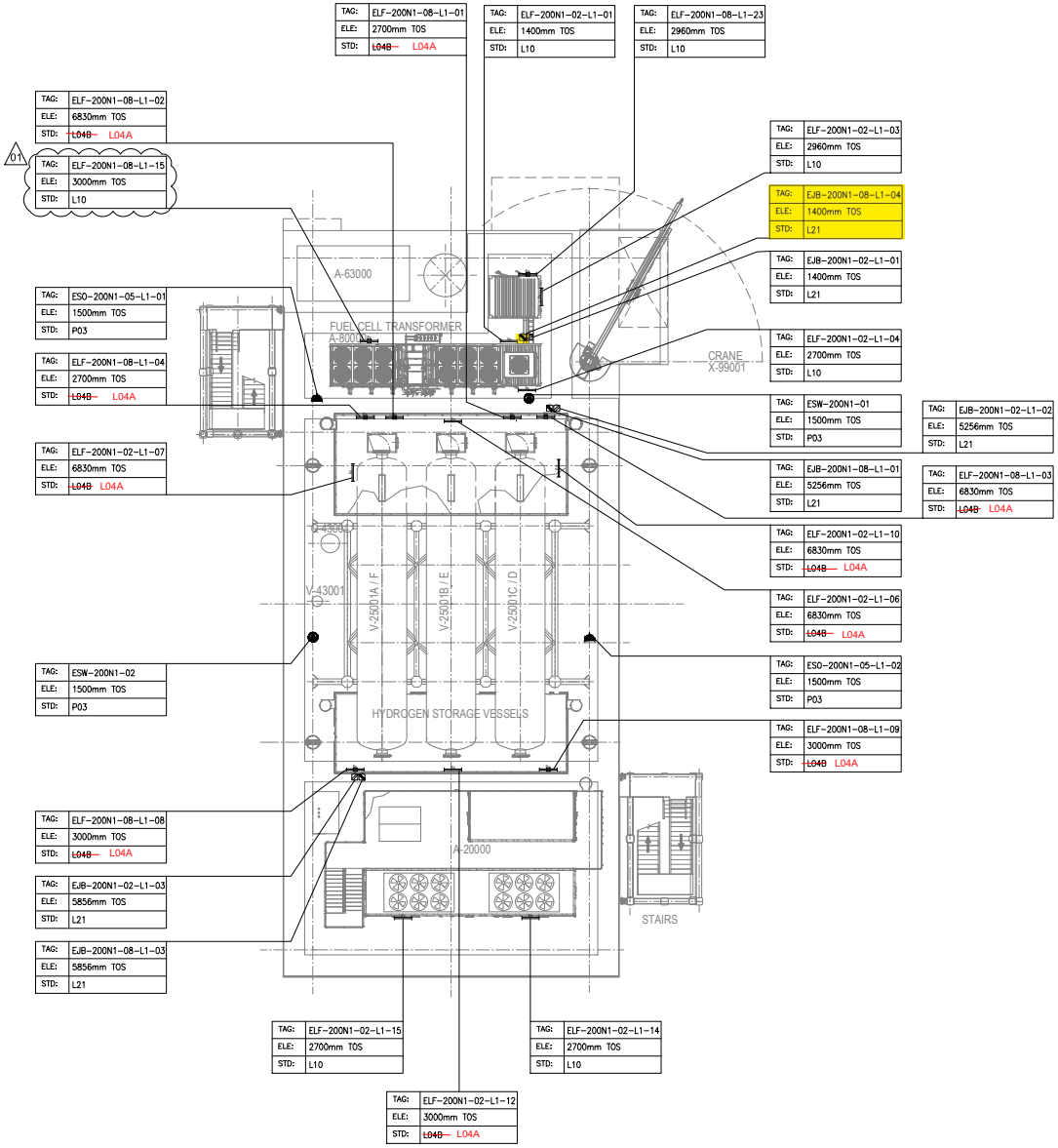
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

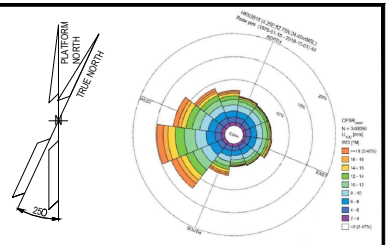
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINA)	
Name	Michele Tartaglia	Gabriele Bertuccelli	
Date	2025-01-10	2025-01-23	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:25:35.462Z	PROVERLIS Digitaly signed by Gabriele Bertuccelli 2025-01-23T17:22:03.989Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20118

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

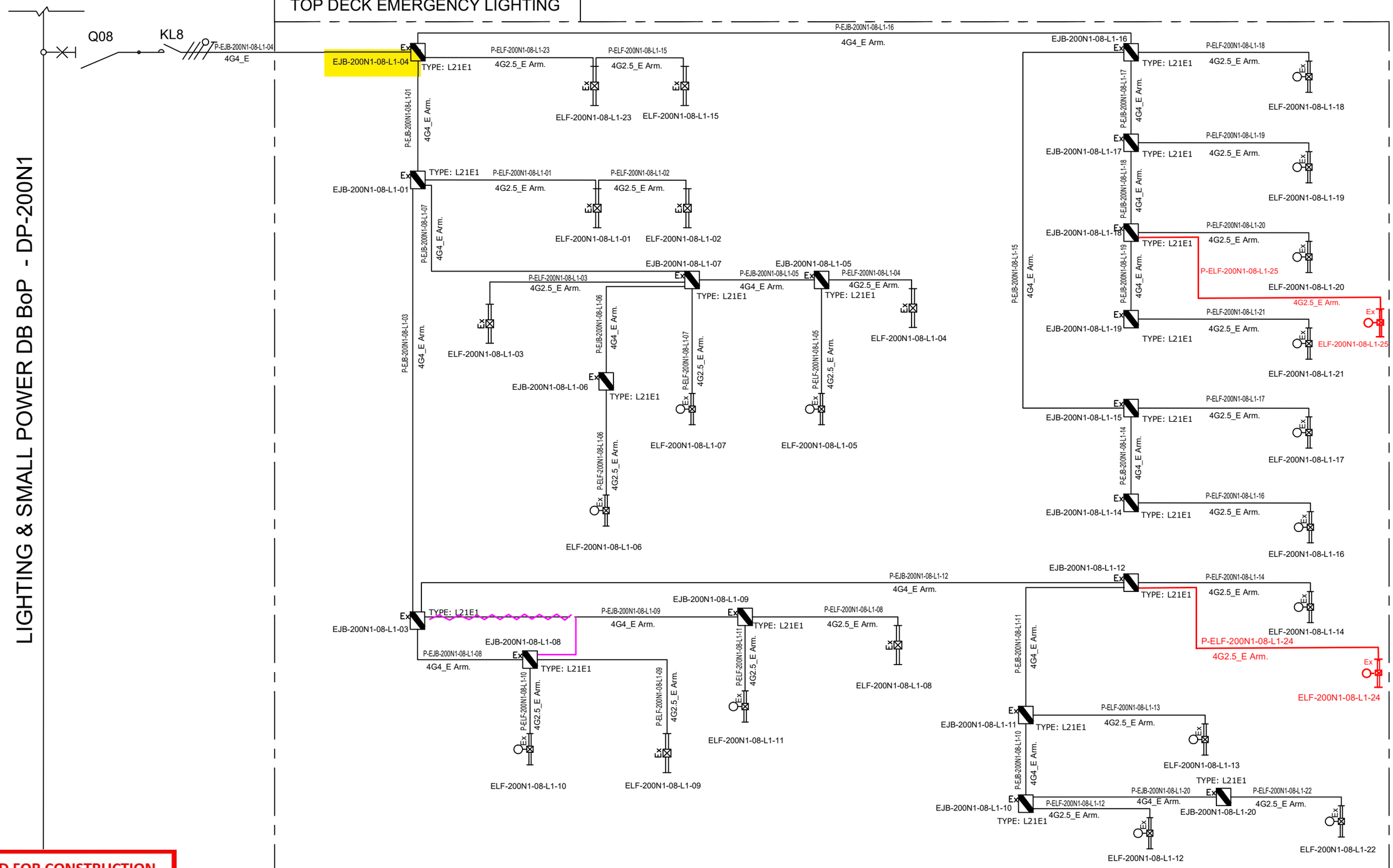
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

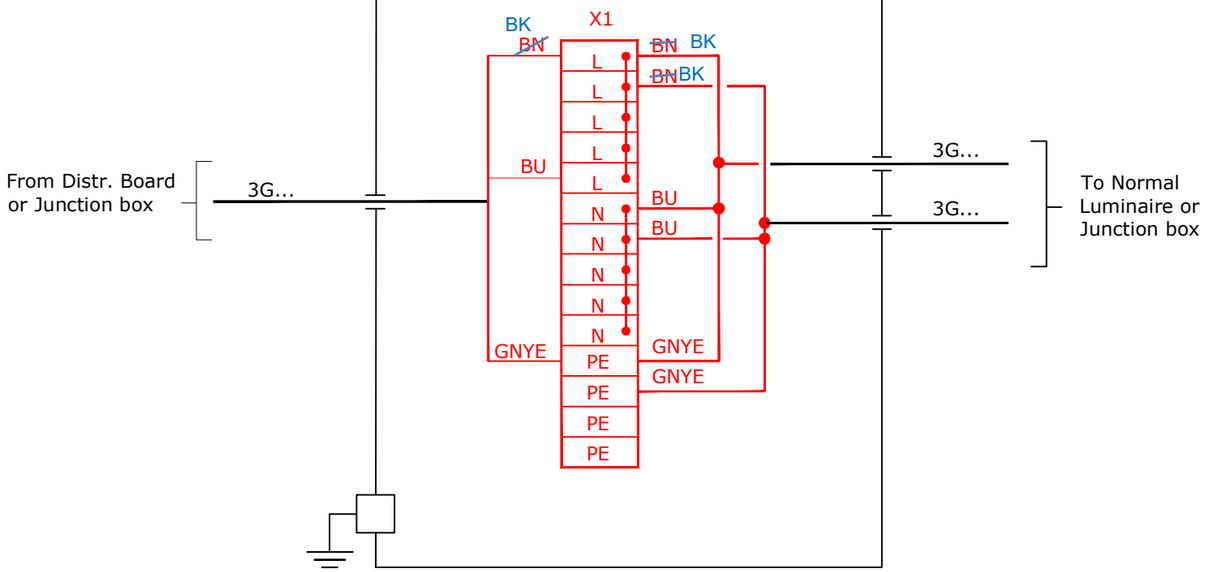
CROSSWIND

ROSETTI MARINO

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

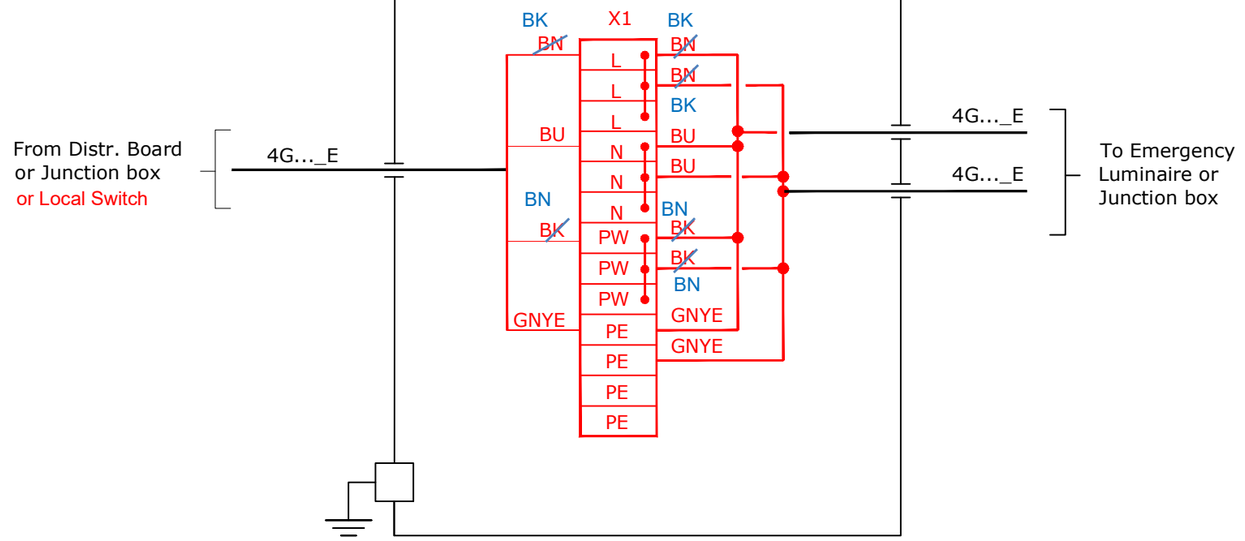
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

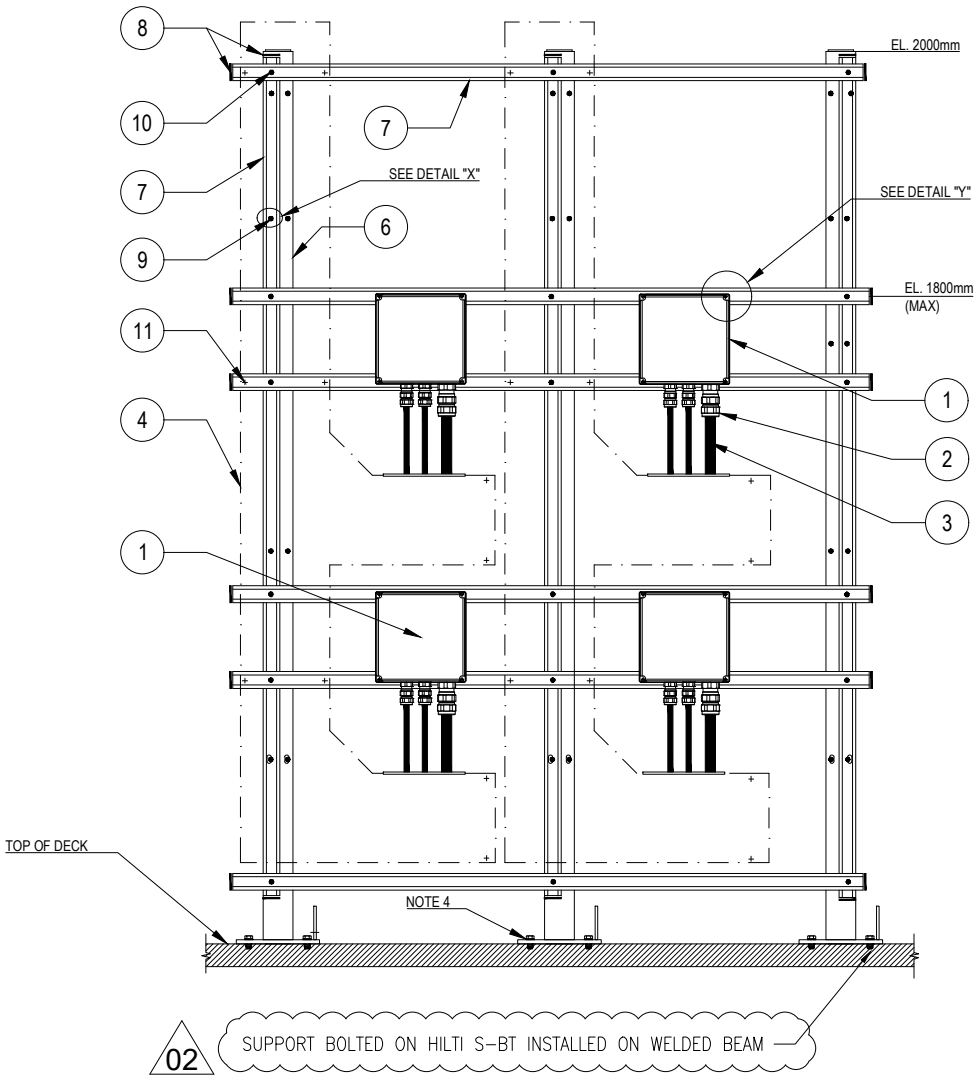
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

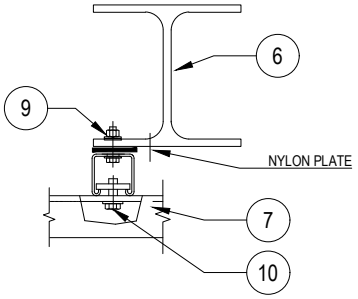
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L21

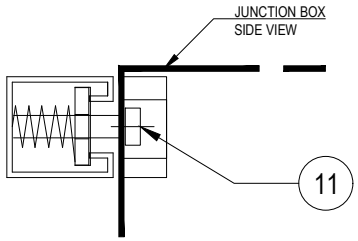


02

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX (Ex)	GRP			
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS			NOTE 2
3	ARMOURED/UNARMOURED CABLE				
4	CABLE LADDER WITH COVER	AISI 316L			
6	PROFILE SUPPORT	PAINTED C.S			
7	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
8	PLUG FOR U-CHANNEL	LPDE			
9	HEXAGONAL BOLT M10X40 WITH LARGE PLANE WASHER, NYLON PLANE WASHER, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10x40		
10	HEXAGONAL BOLT M12X30 COMPLETE WITH LARGE PLANE WASHER, PLANE WASHER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M12x30		
11	ALLEN KEY BOLT COMPLETE WITH PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x30		NOTE 3



DETAIL "X"



DETAIL "Y"

NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) FOR INSTRUMENT JUNCTION BOX USE HEXAGONAL BOLT M10X30 COMPLETE WITH PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING
4) SUPPORT BOLTED ON HILTI S-BT INSTALLED ON THE DECK

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
JUNCTION BOXES MOUNTED RACK SUPPORT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

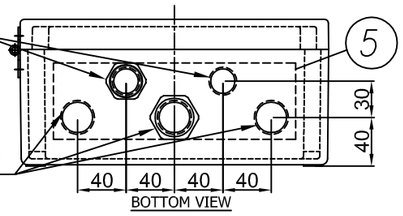
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

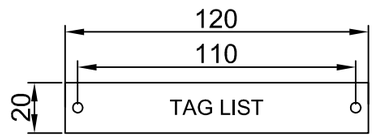
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

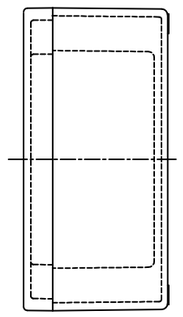
A002MAX

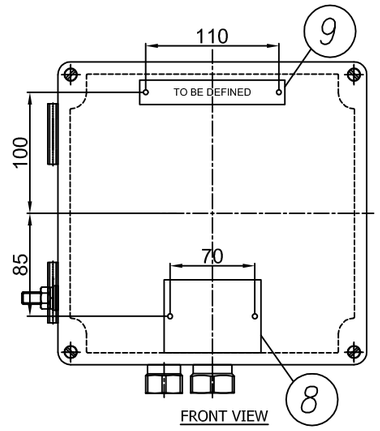
(9) PLATE DETAIL



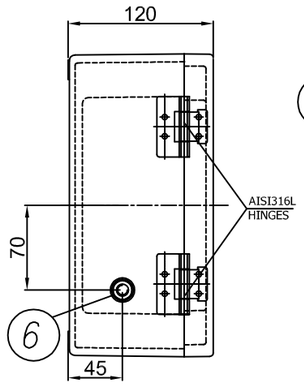
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

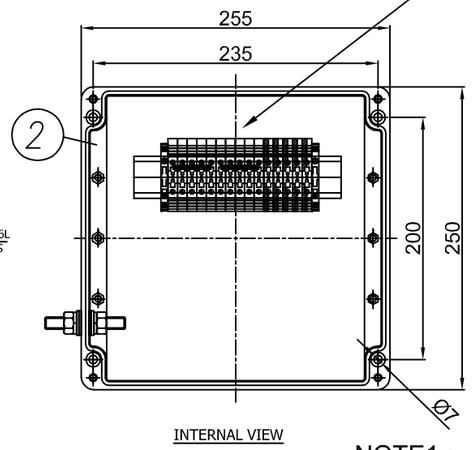

RIGHT VIEW



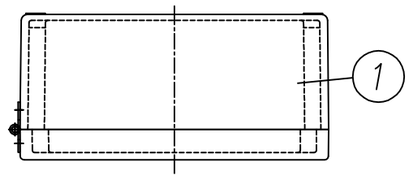
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

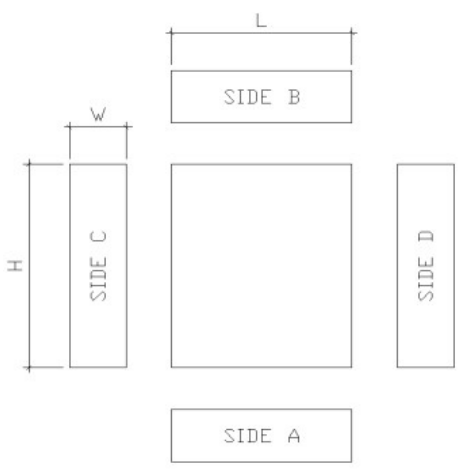
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

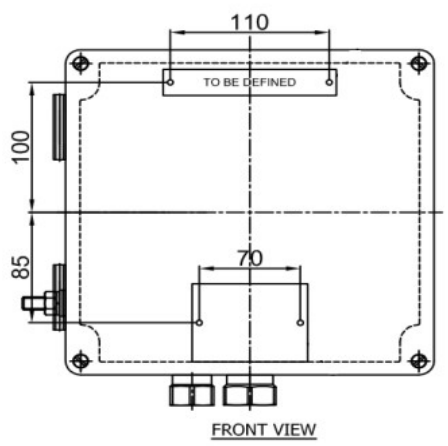
File Name : 1724001481-EL-DA-00003 Rev. 01

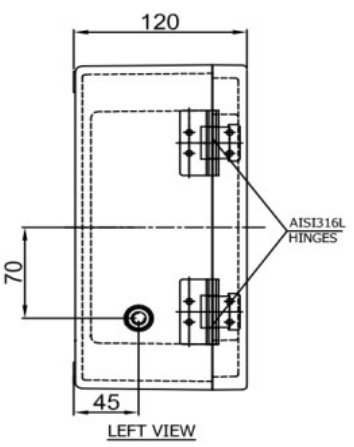
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
CB-200F4B	AC UPS F&G - Battery Isolator-B	CONTAINER B-300 (LOWER DECK)	1724000372	3W Power	Cortem Spa		EJBC	Zone 1	EPT 20 ATEX 4075X	1724000372-EL-DG-00011	II 2GDEx db IIC T6 Gb Ex tb IIIC T 85°C Db	-	N/A	True	N/A	False	
EAT-200N1-01	Trace Heating - Remote Ambient Thermostat	LOWER DECK	1724001647	nVent	nVent	1244-022663	ETS-05-A2-E-A	Zone 1	Baseefa 13ATEX0137	1724001647-EL-DD-00004	II 2(1)G Ex eb ia mb [ia Ga] IIC T5 Gb - 40ºC ≤ Ta ≤ +60ºC II 2D Ex tb IIIC T100ºC Db	-	N/A	True	N/A	False	
EHT-1001-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1002-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1003-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-B	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1005-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1006-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1007-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-2002-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EJB-200F2-01	Top Obstruction Lights Junction Box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990082	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
EJB-200F2-02	Intermediate obstruction lights junction box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990083	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_4
EJB-200N1-02-L1-01	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990045	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-02	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990044	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-03	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990043	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-02-L1-05	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990058	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-06	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990057	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-07	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990059	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-08	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990060	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-09	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990061	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-10	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990047	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-11	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990056	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-12	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990055	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-13	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990054	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-14	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990053	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-15	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990052	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-16	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990051	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-17	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990050	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-18	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990049	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-19	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990048	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-20	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990072	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-01	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990003	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-02	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990004	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-03	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990002	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-04	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990001	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-05	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990012	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-06	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990011	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-07	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990010	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-08	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990009	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-09	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990008	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-10	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990007	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-11	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990006	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-12	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990005	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-13	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990014	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-14	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990013	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-01	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990032	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-02	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990033	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-01	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990064	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-03	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990062	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-08-L1-04	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990065	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-05	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990077	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-06	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990078	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	

Fiditas
explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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This certificate may only be reproduced in its entirety, without any change, schedule included

[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Fiditas Ltd. Karlovačka cesta 197, 10250 Zagreb-Lučko, Croatia
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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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Fiditas
explosion safety solutions

17065 · HAA
3635

[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

Fiditas Ltd. Slavka Tomerlina 44, 10361 Zagreb-Sesvete, Croatia
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This certificate may only be reproduced in its entirety, without any change, schedule included

[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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Phone: +385 1 5578565; info@fiditas.com ; www.fiditas.com

[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

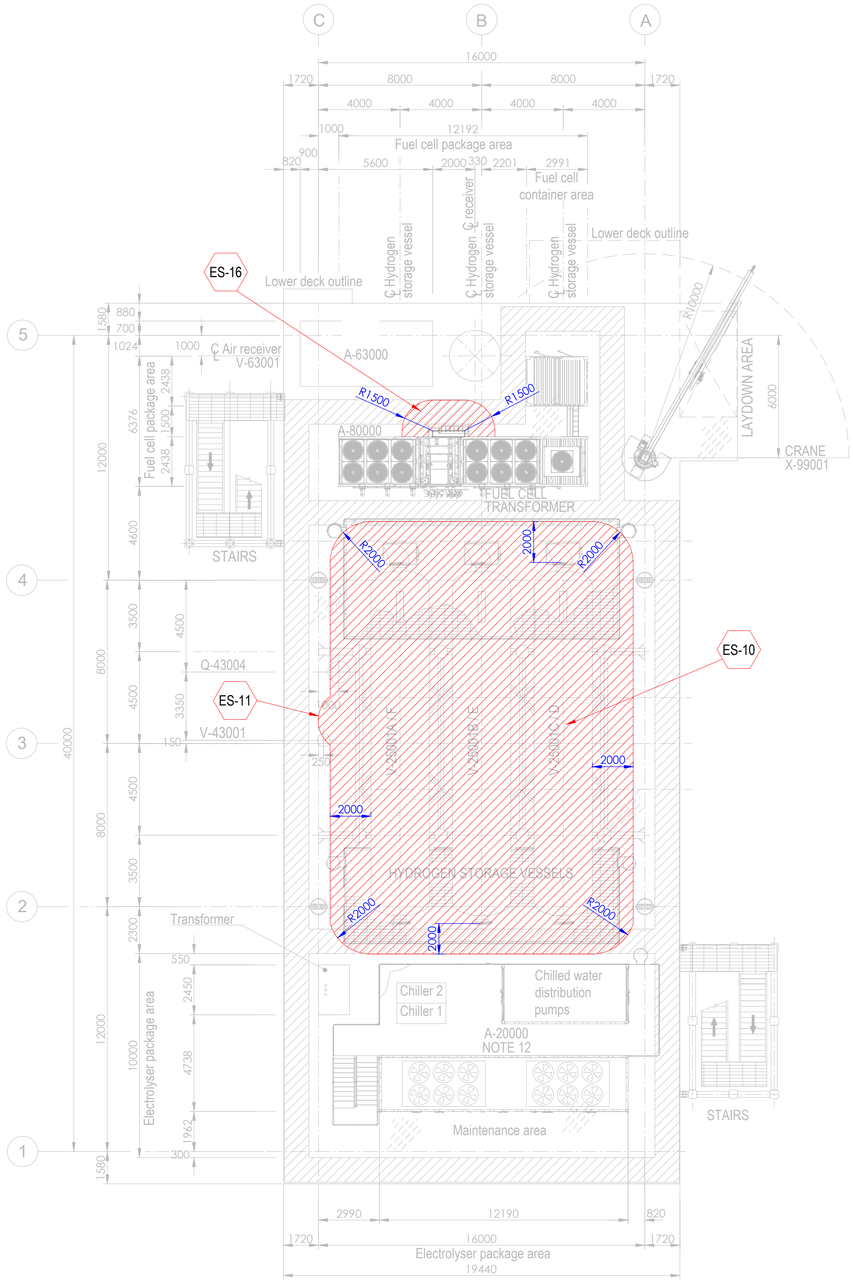
[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

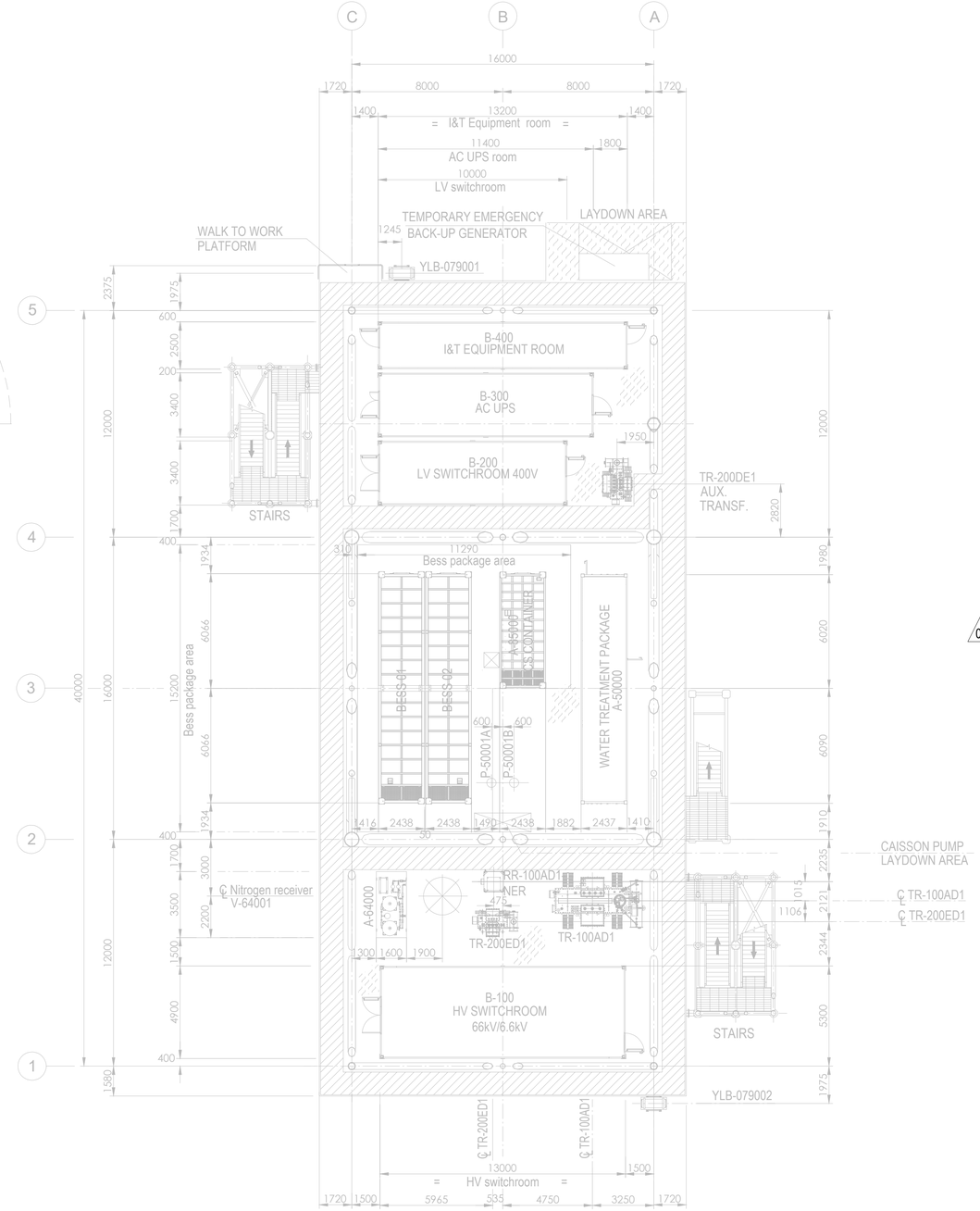
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



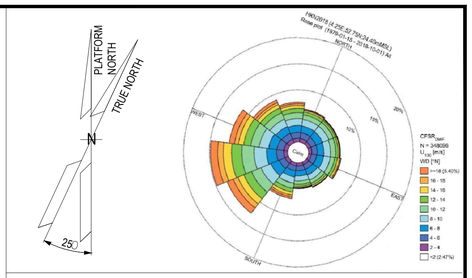
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

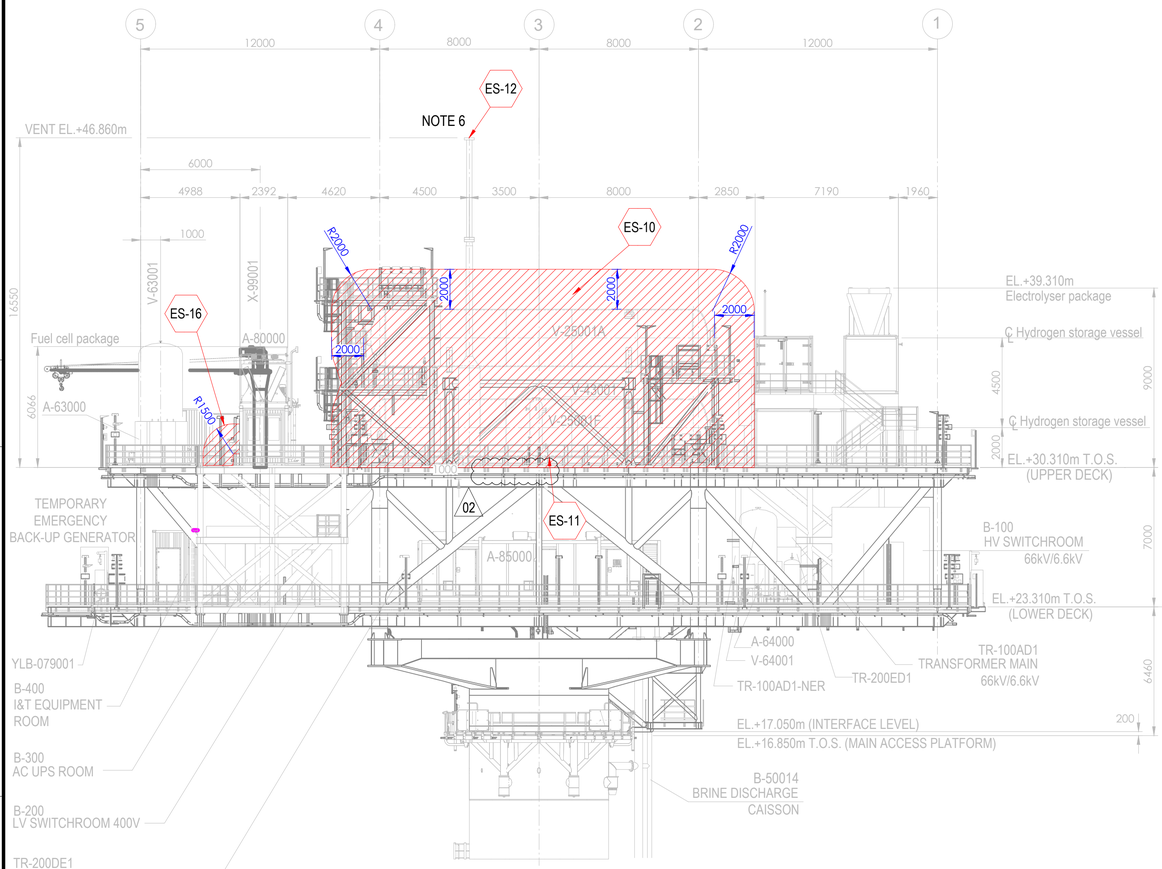
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

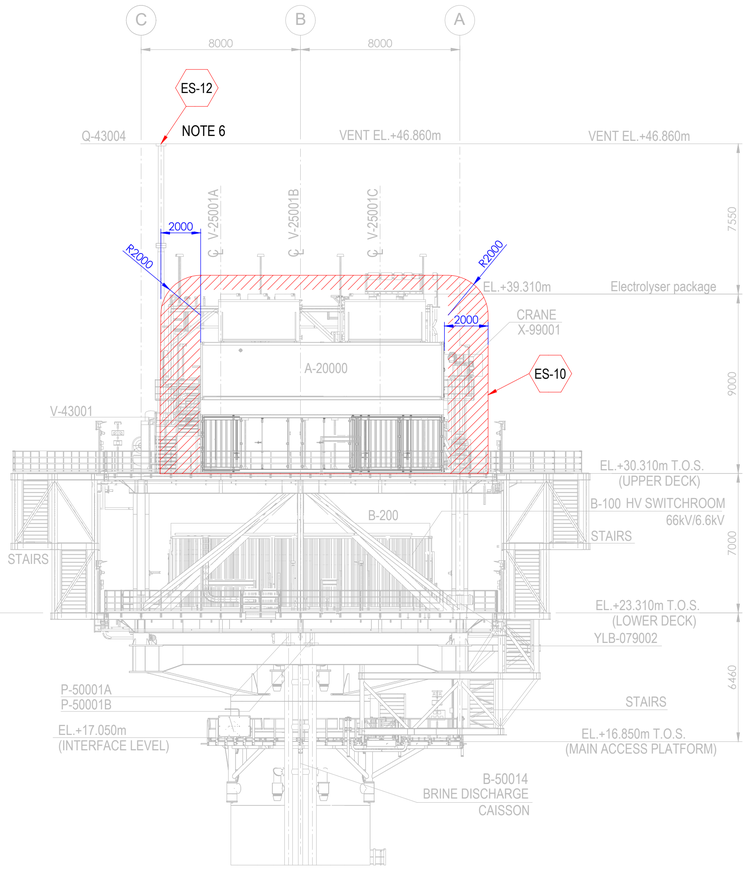
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

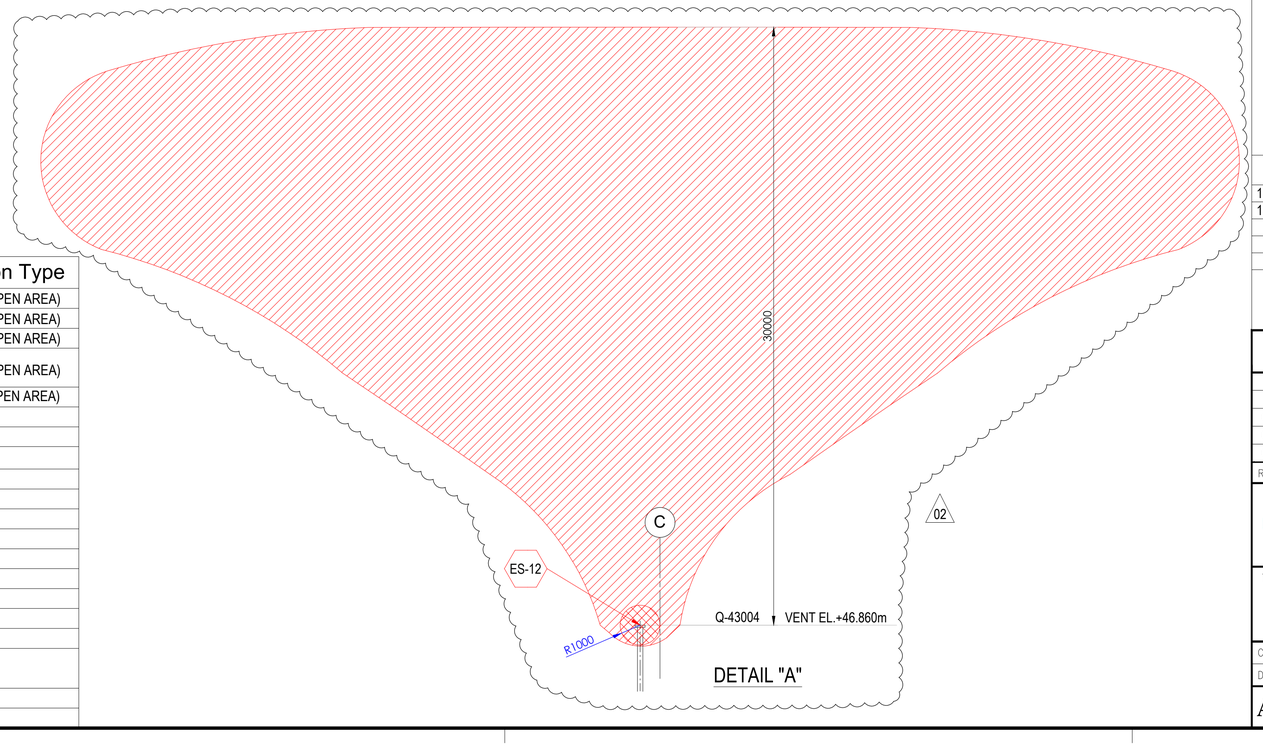


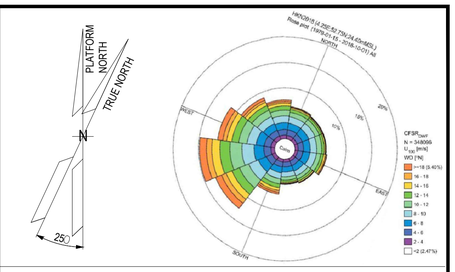
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-15 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001392	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-15	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001392		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	PL	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-15	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001392		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

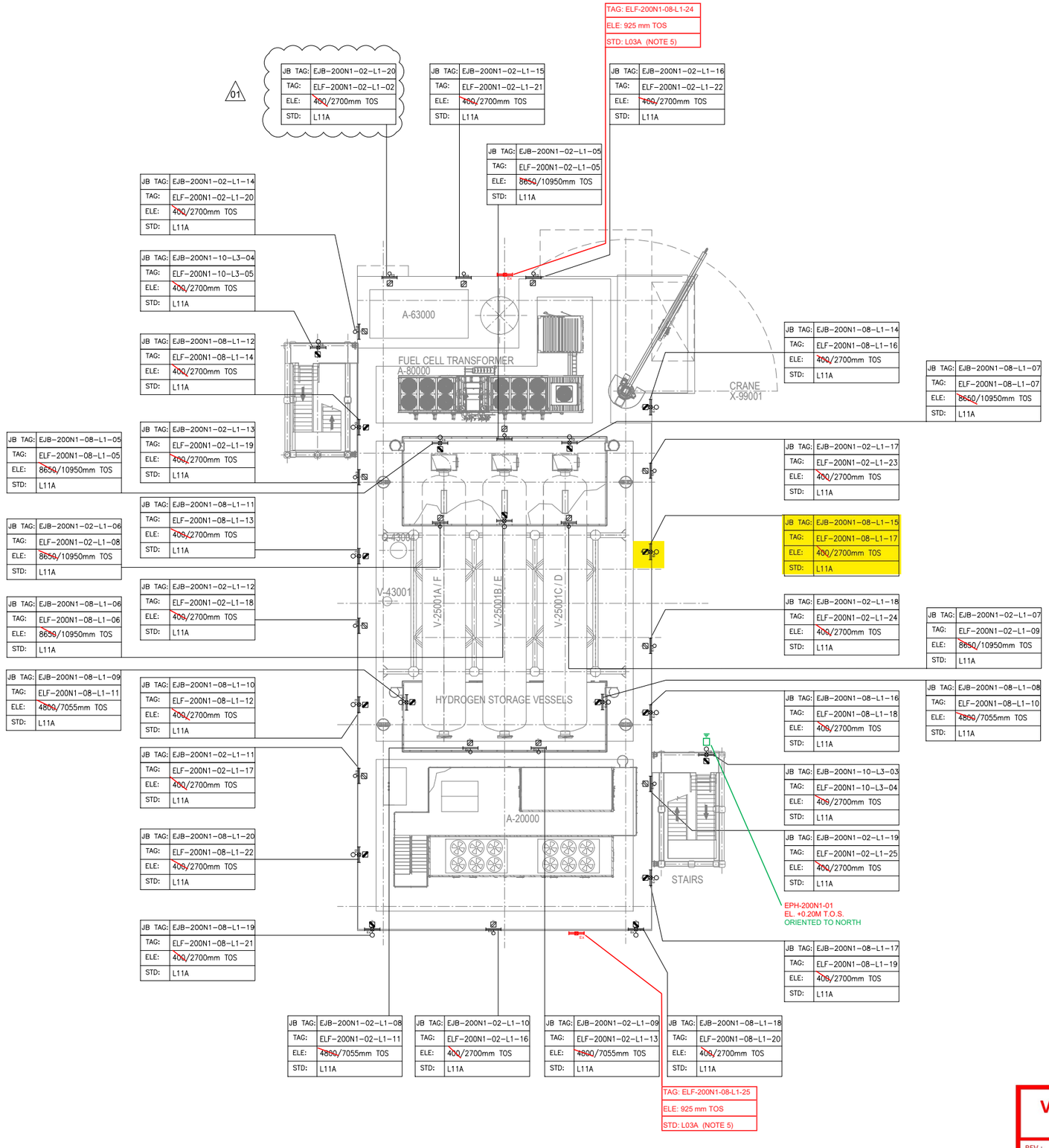
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

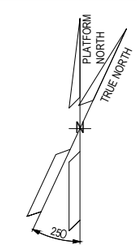
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:26:14.082Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-16T09:16:11.094Z	

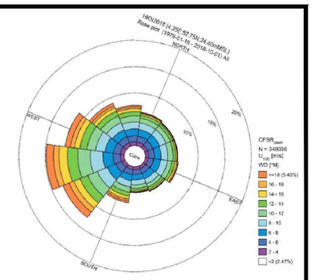
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

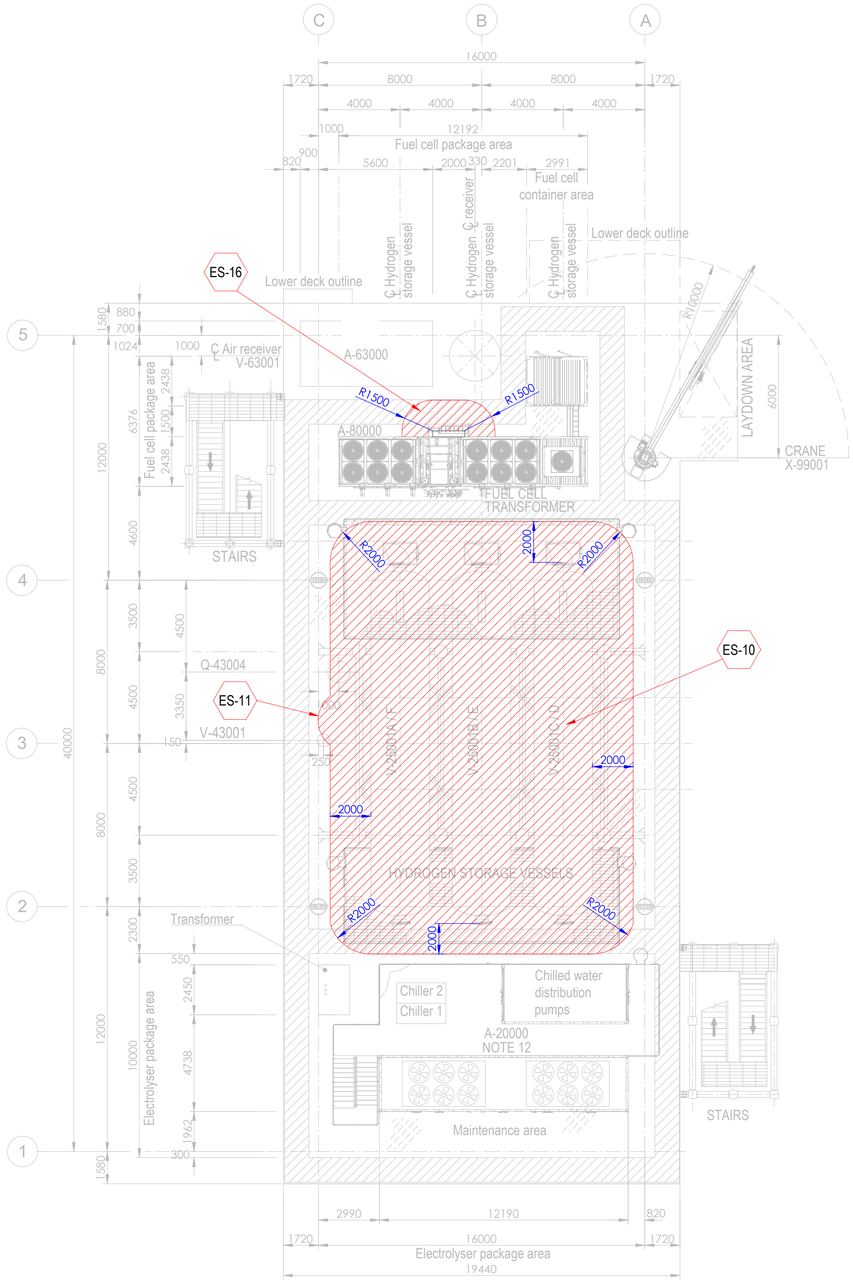
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150	
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

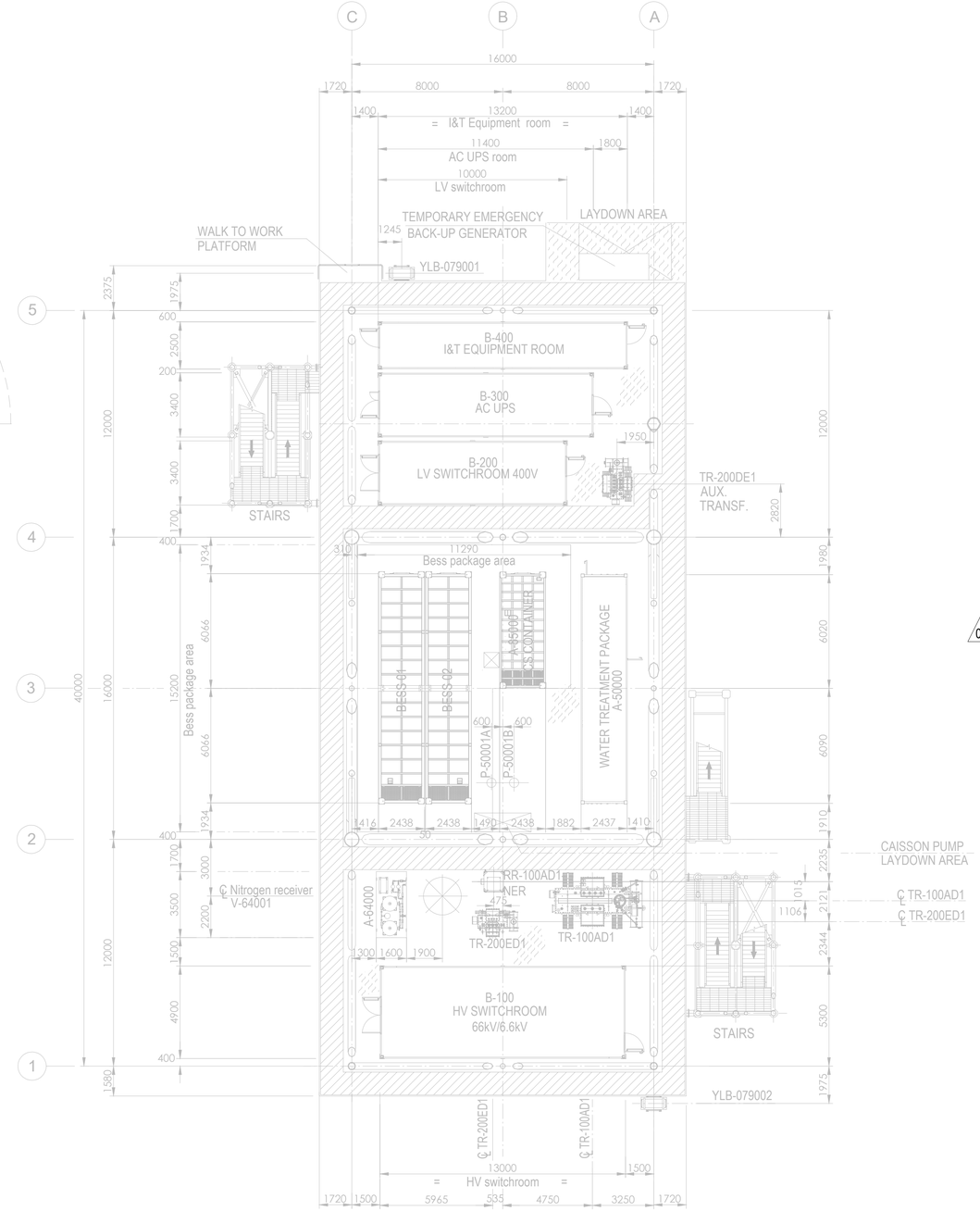
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



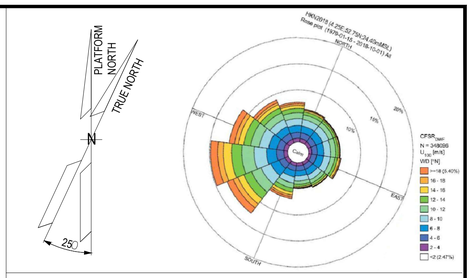
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

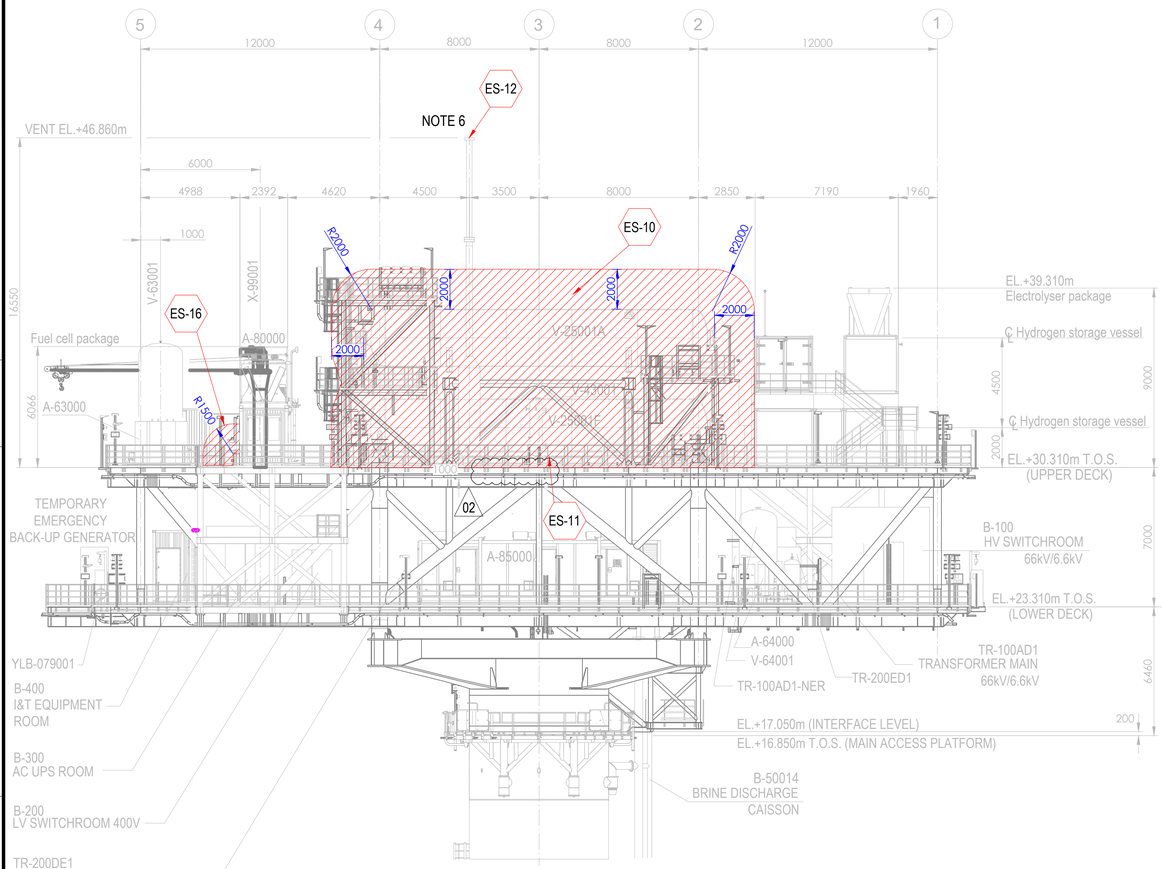
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

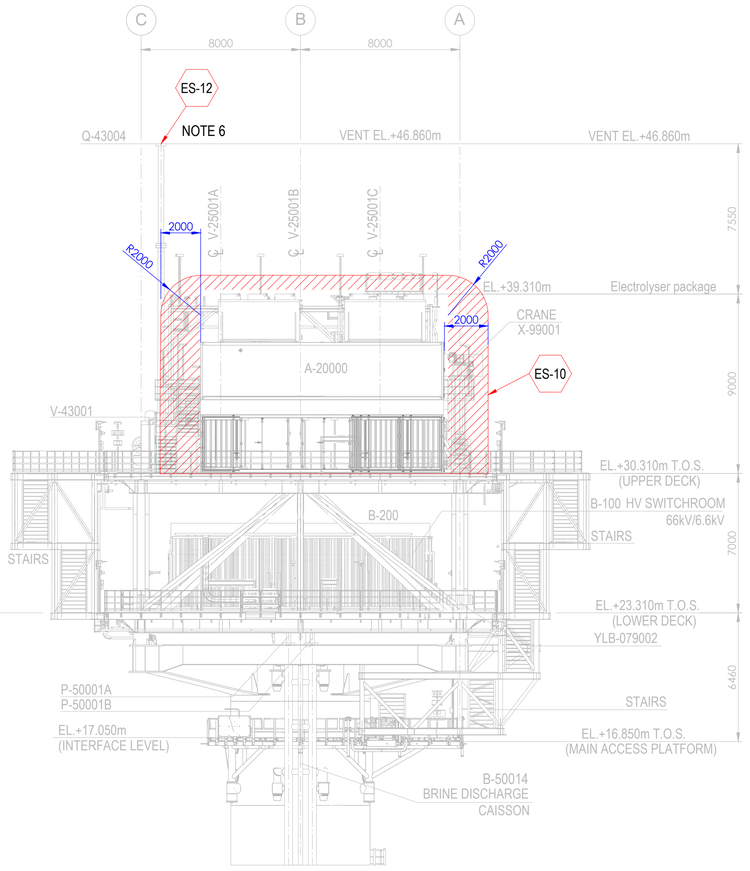
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

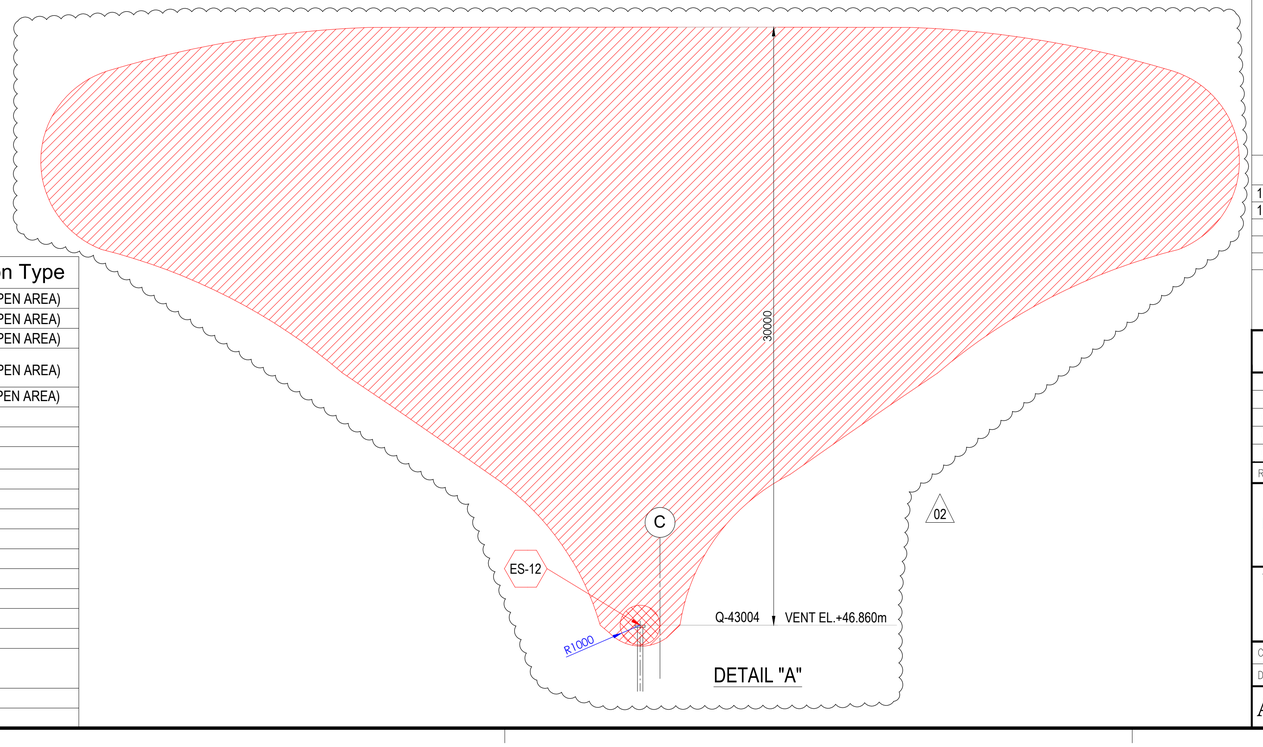


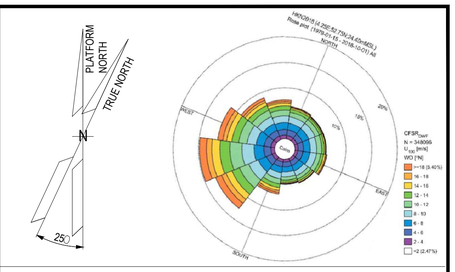
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

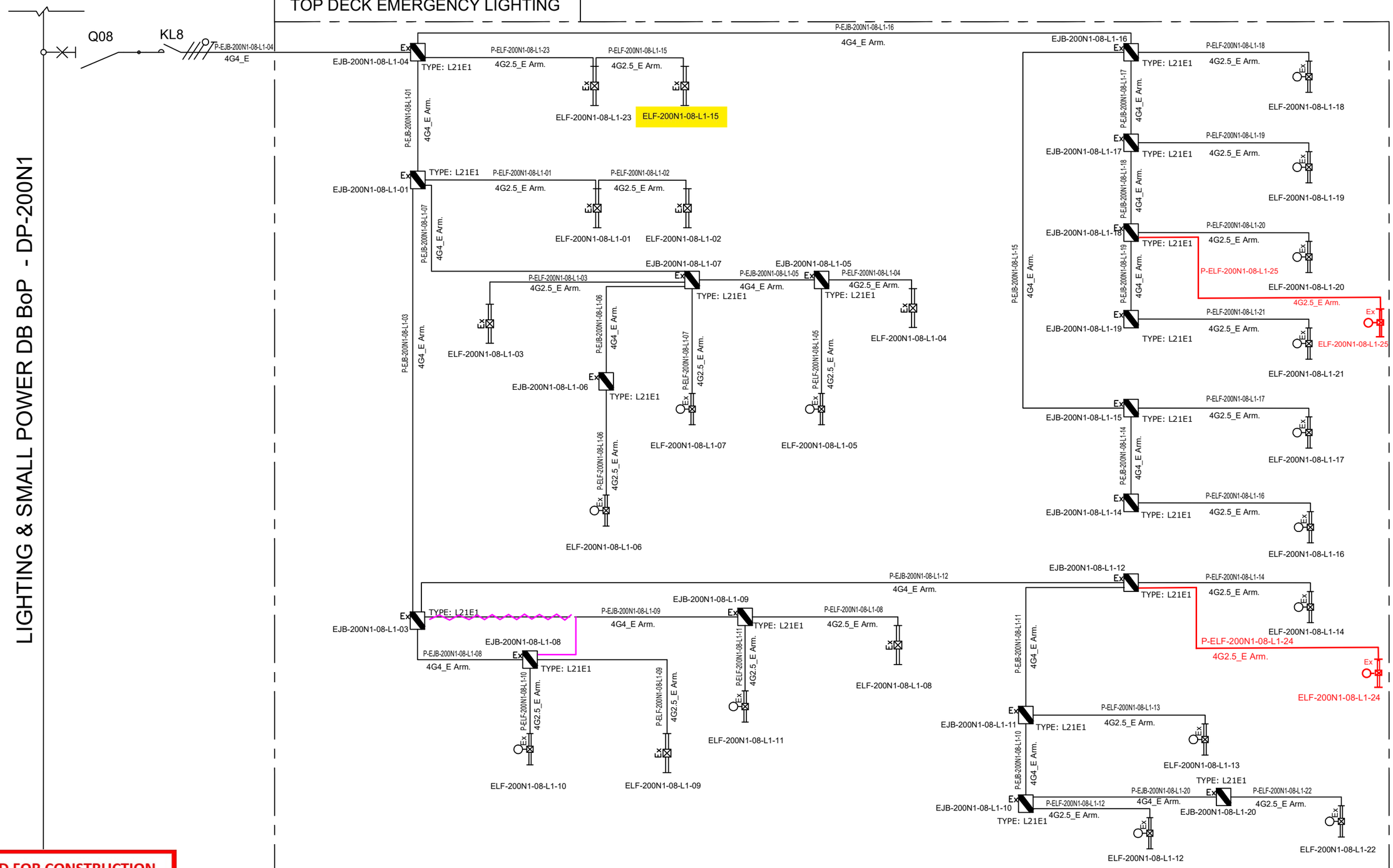
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

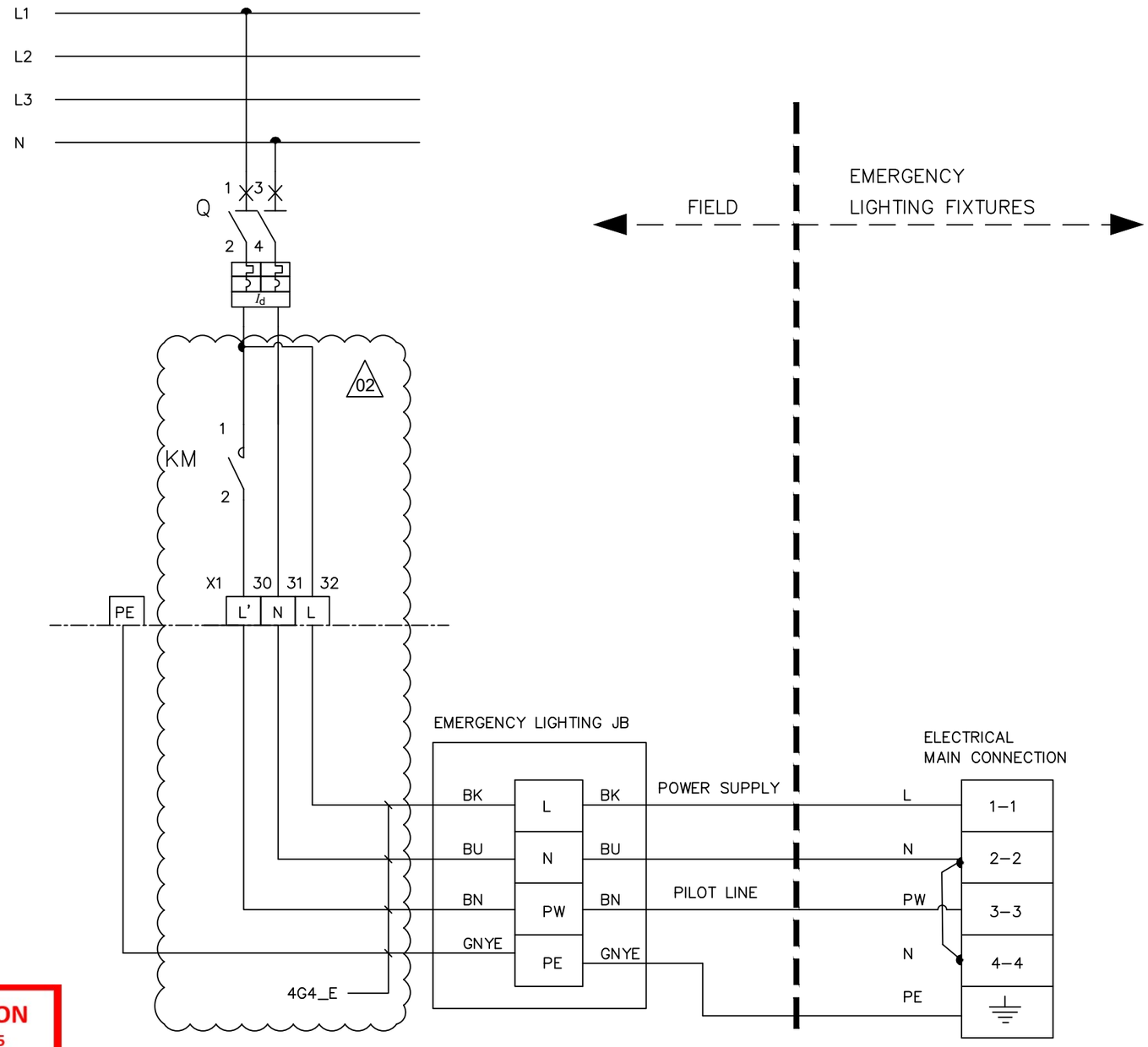
REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz



L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

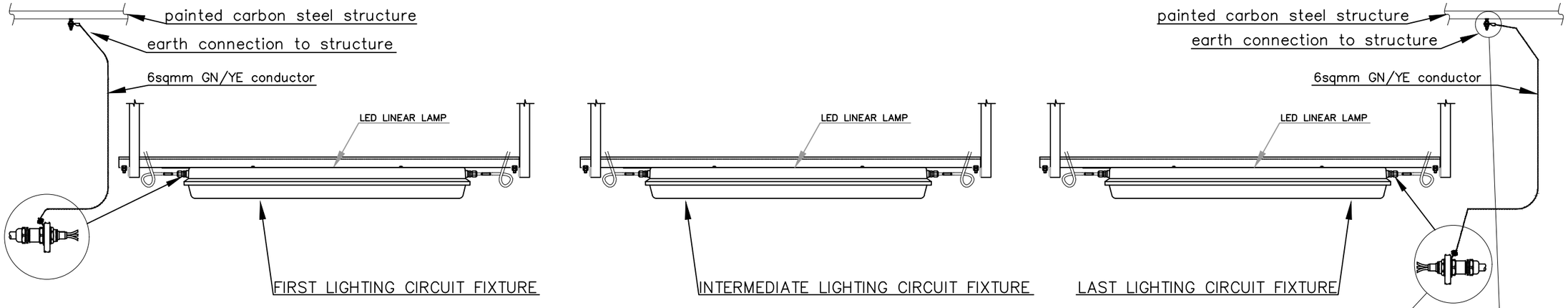
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20125

E32

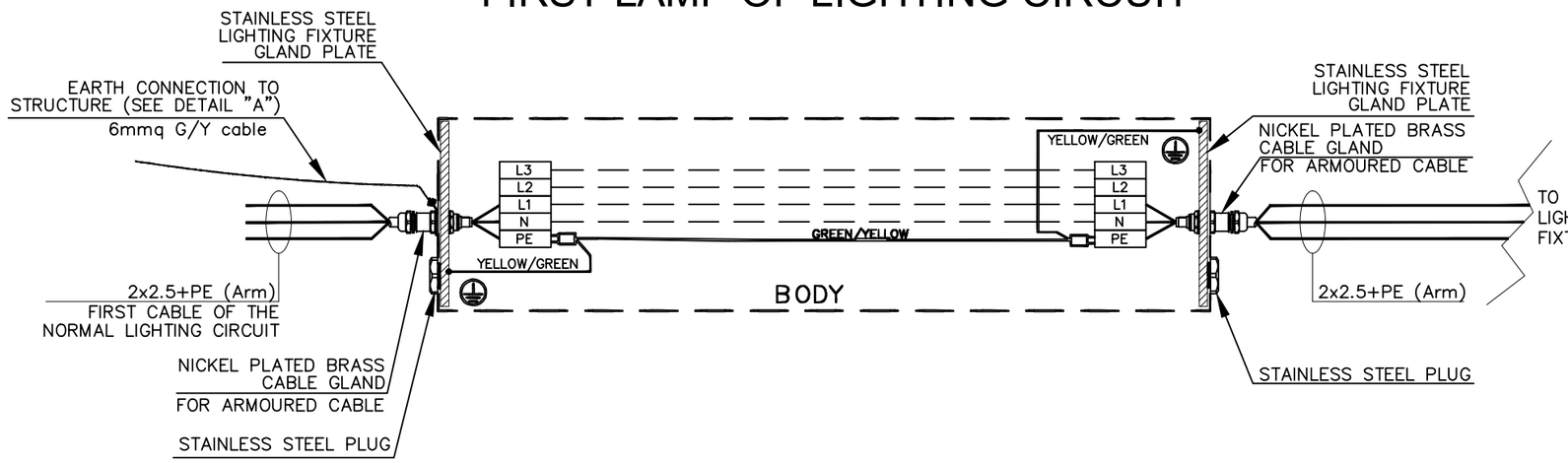


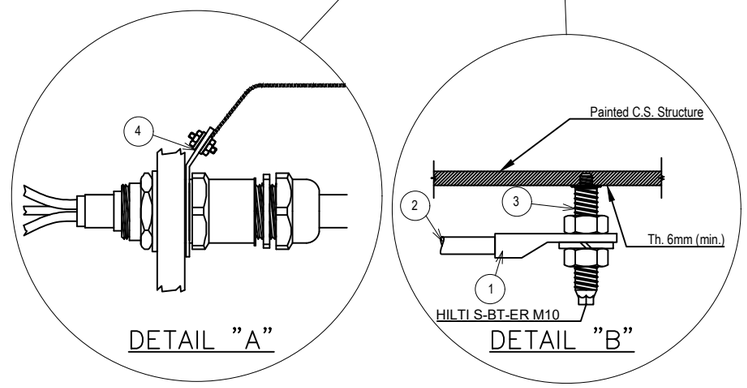
ONLY the first and the last lighting fixture of all circuits are connected to earthing system. The earthing continuity of the intermediate lighting fixtures of the circuits is guaranteed by the using of the first and the last lighting fixture earthing connection which is permanently connected to the earthing system as per the typical below.

Refer also to TYP. "E05" for Lighting Fixtures.

NORMAL LIGHTING CIRCUIT EARTHING CONTINUITY TYPICAL

FIRST LAMP OF LIGHTING CIRCUIT





POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			
2	Y/G INSULATING COPPER CONDUCTOR		6sqmm	ASR	
3	HILTI S-BT-ER M10/15 SN6 C/W NUTS AND GROWER	AISI 316L	M10X28		NOTE 1
4	CABLE GLAND EARTH TAG	NPB	M20		

The same logic is used for the earthing continuity of Emergency Lighting Circuits. The above typical has been done to represent the Earthing Continuity of G/Y conductors, the correct connections of all conductors in the respective Terminal Strips are shown in doc. AR-FEN-10-ROEC-600132 Lighting and Socket Circuit Diagrams.

NOTES:
1) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM FOR SINGLE EQUIPMENTS EARTHING CONNECTION.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING – OUTDOOR LINEAR LIGHTING FIXTURE

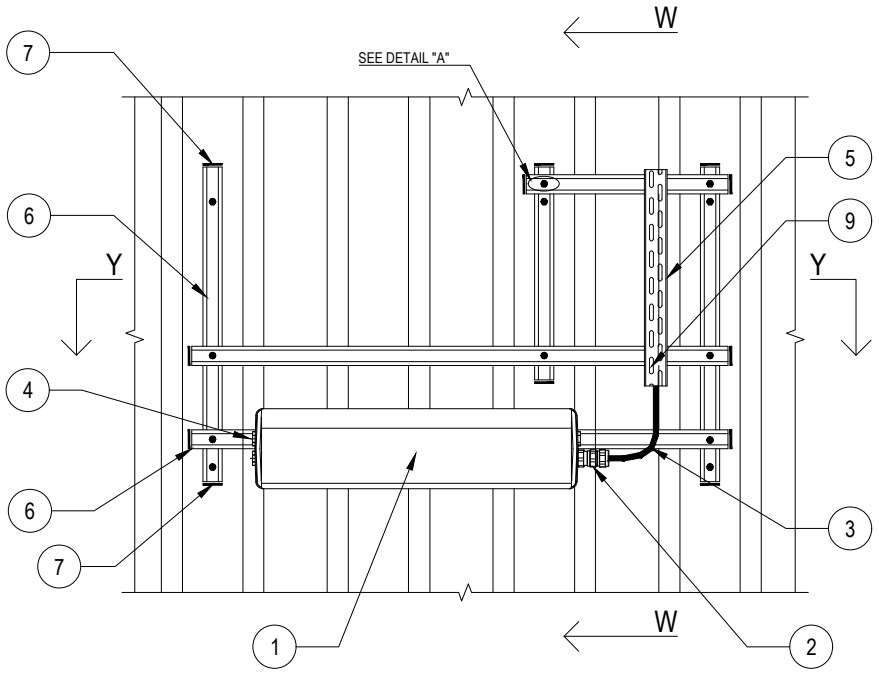
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 023 | REV. 02

F.to UNI A3: 420mmx297mm

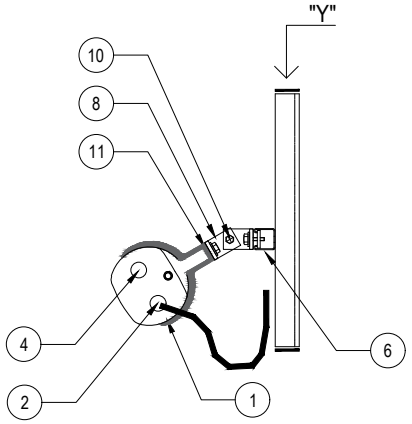
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

L10

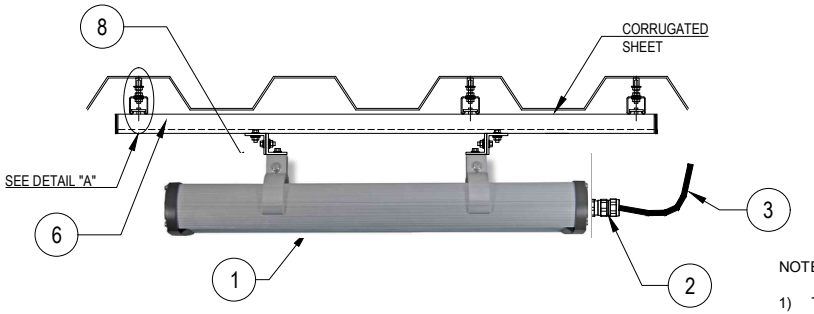


02

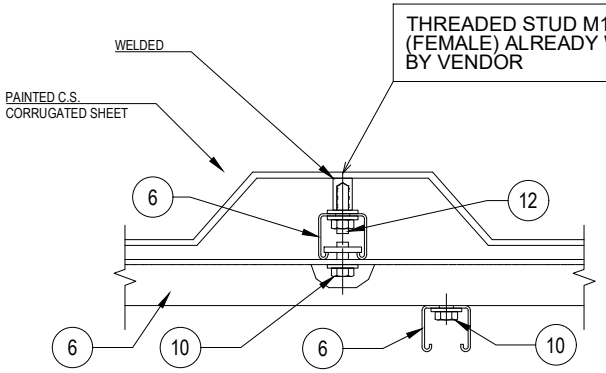
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		AS REQ.	NOTE 2 NOTE 4
3	ARMOURED/UNARMOURED CABLE				NOTE 4
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE TRAY	AISI 316L			
6	SINGLE U-CHANNEL PERFORATED ON NO.3 SIDE	AISI 316L	41x41x2		NOTE 1
7	PLUG FOR U-CHANNEL	LPDE		AS REQ.	
8	ANGLE PLATE FOR ORTOGONAL-TRASV. CONNECTION WITH NO. 2 HOLES FOR UNISTRUT PROFILE 41x41x2X2	AISI 316L		4	
9	DOUBLE SLOT CROWNED HEAD SCREW WITH NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x20		
10	HEX. BOLT WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10x30	4	
11	HEX. BOLT WITH PLANE WASHER	AISI 316L	M8x16	2	
12	THREADED ROD COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



SECTION "W-W"



SECTION "Y-Y"



DETAIL "A"

NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON WALL WITH U-CHANNEL

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 012 | REV. 02

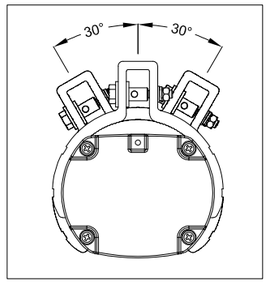
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

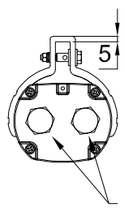
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

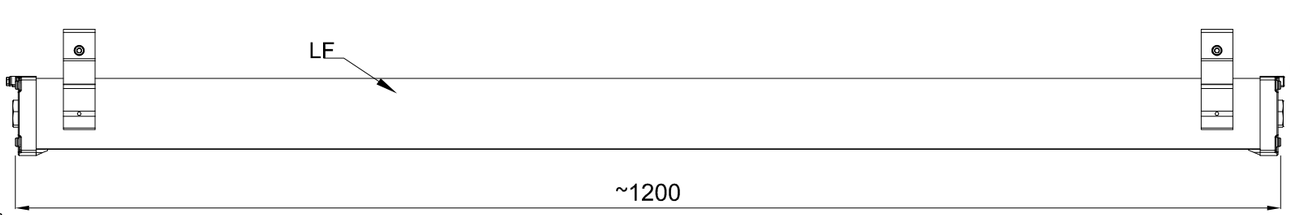
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

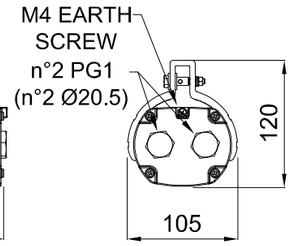


n°2 PG1
(n°2 Ø20.5)

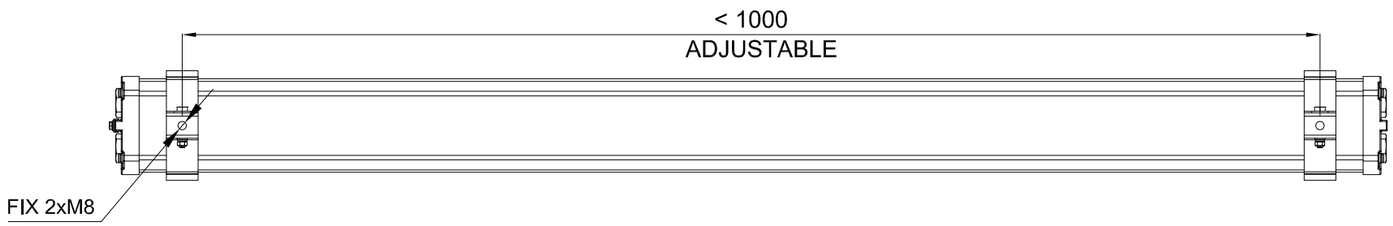
FRONT SIDE



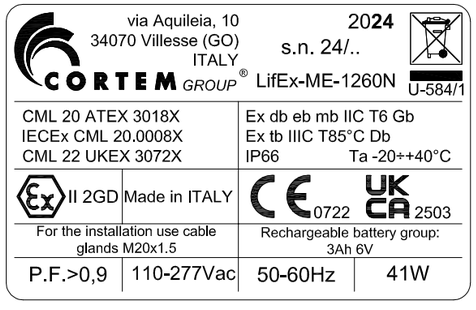
RIGHT SIDE (IN)



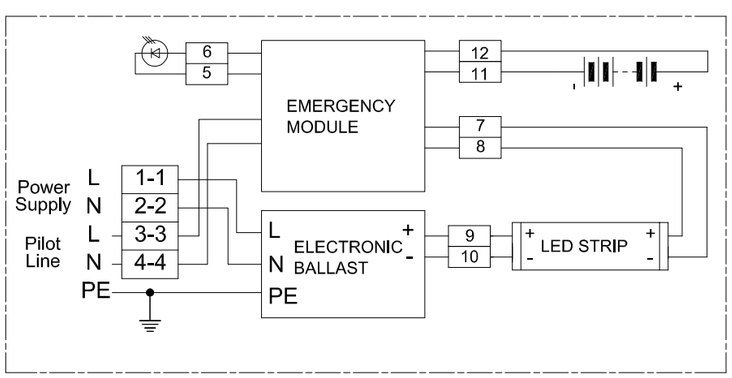
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

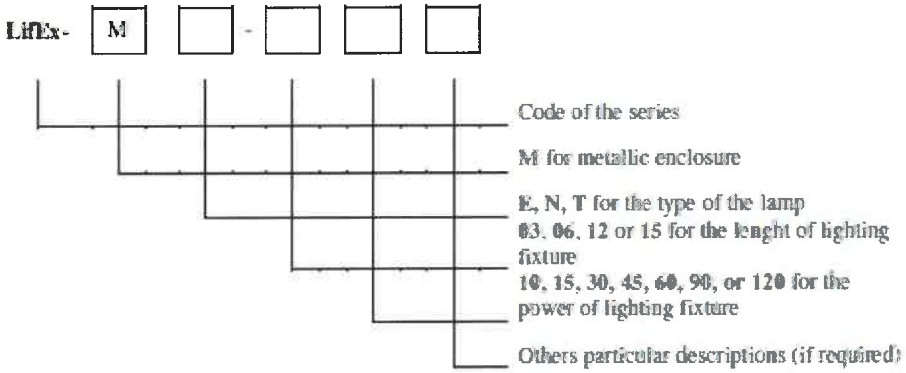
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

ITEM	Tag	ELF-200N1-08-L1-16 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001393	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T5	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	OK	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	OK	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-16	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001393		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-16	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001393		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

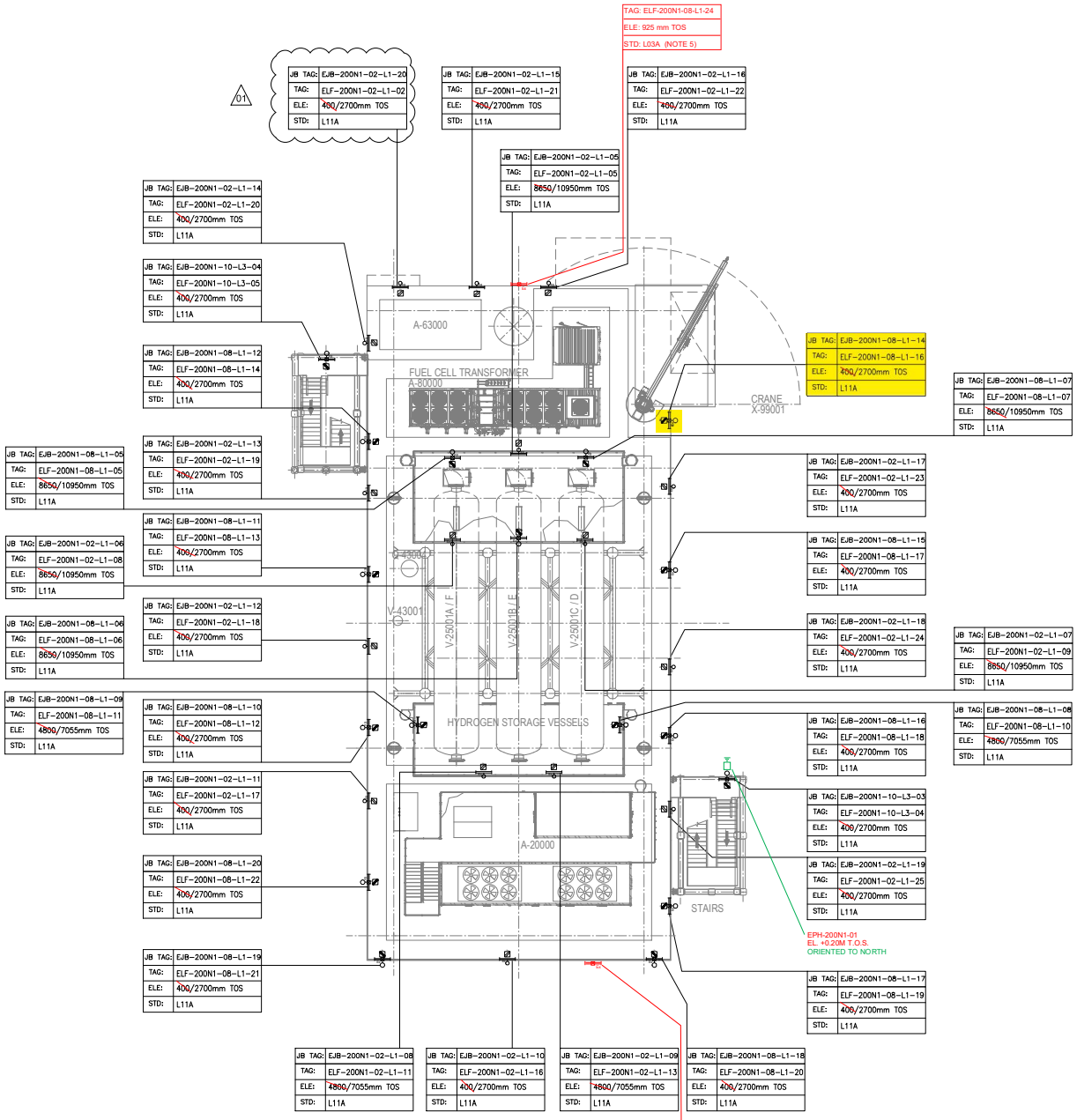
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

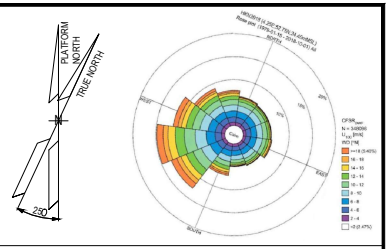
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-11	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T15:15:11.391Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T11:43:11.242Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

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ROSETTI MARINO

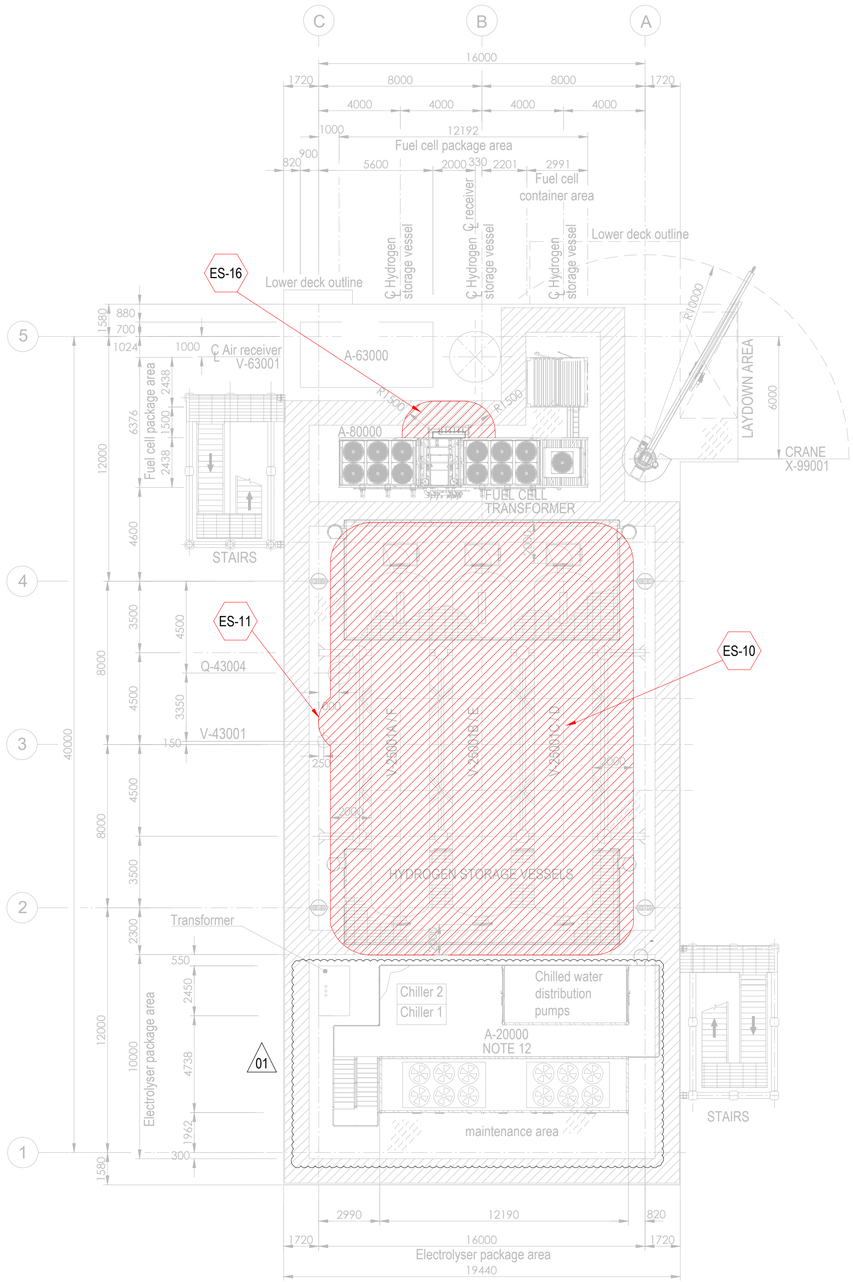
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

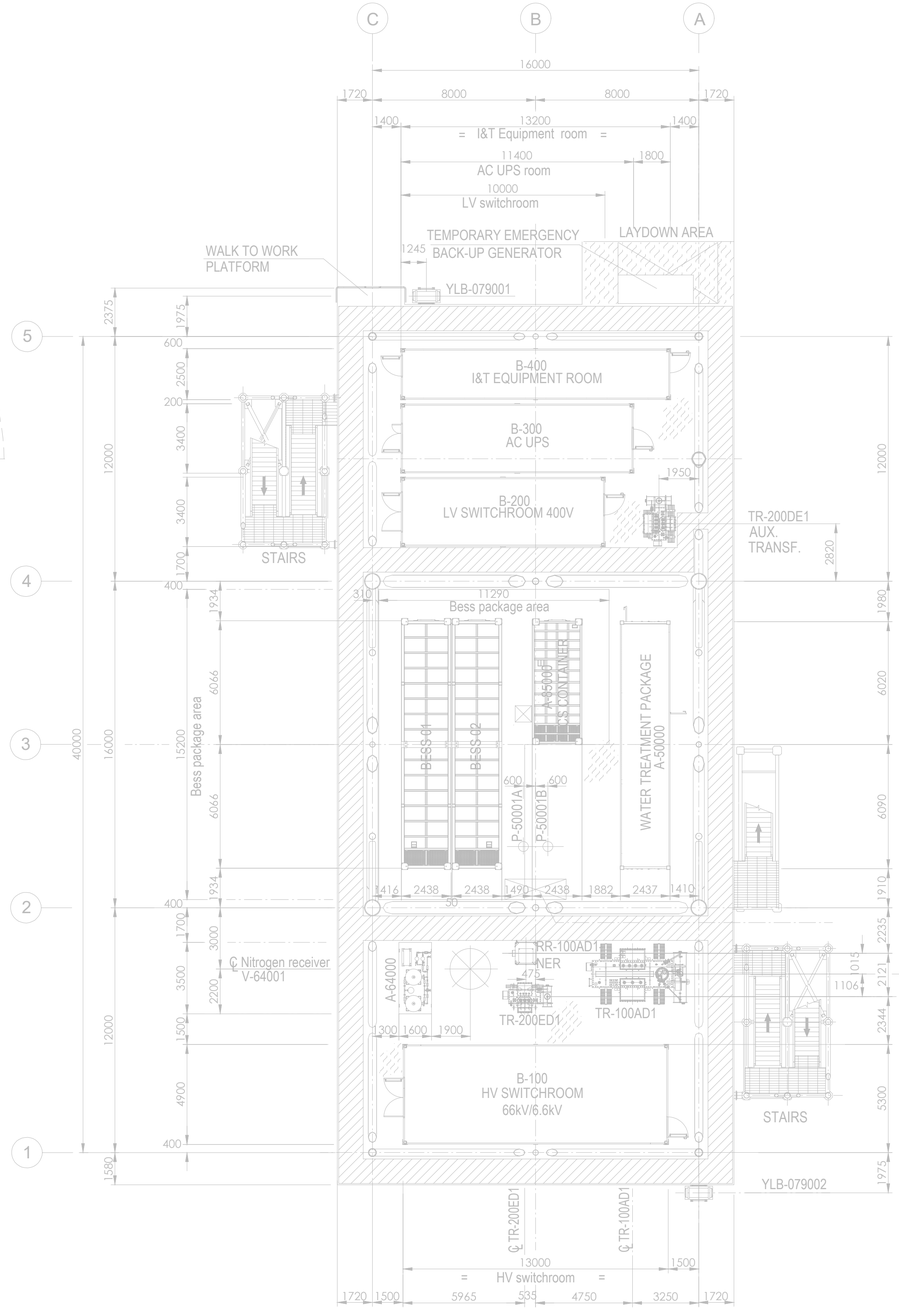
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 01



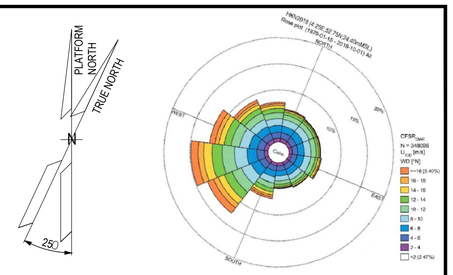
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

01

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

01

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

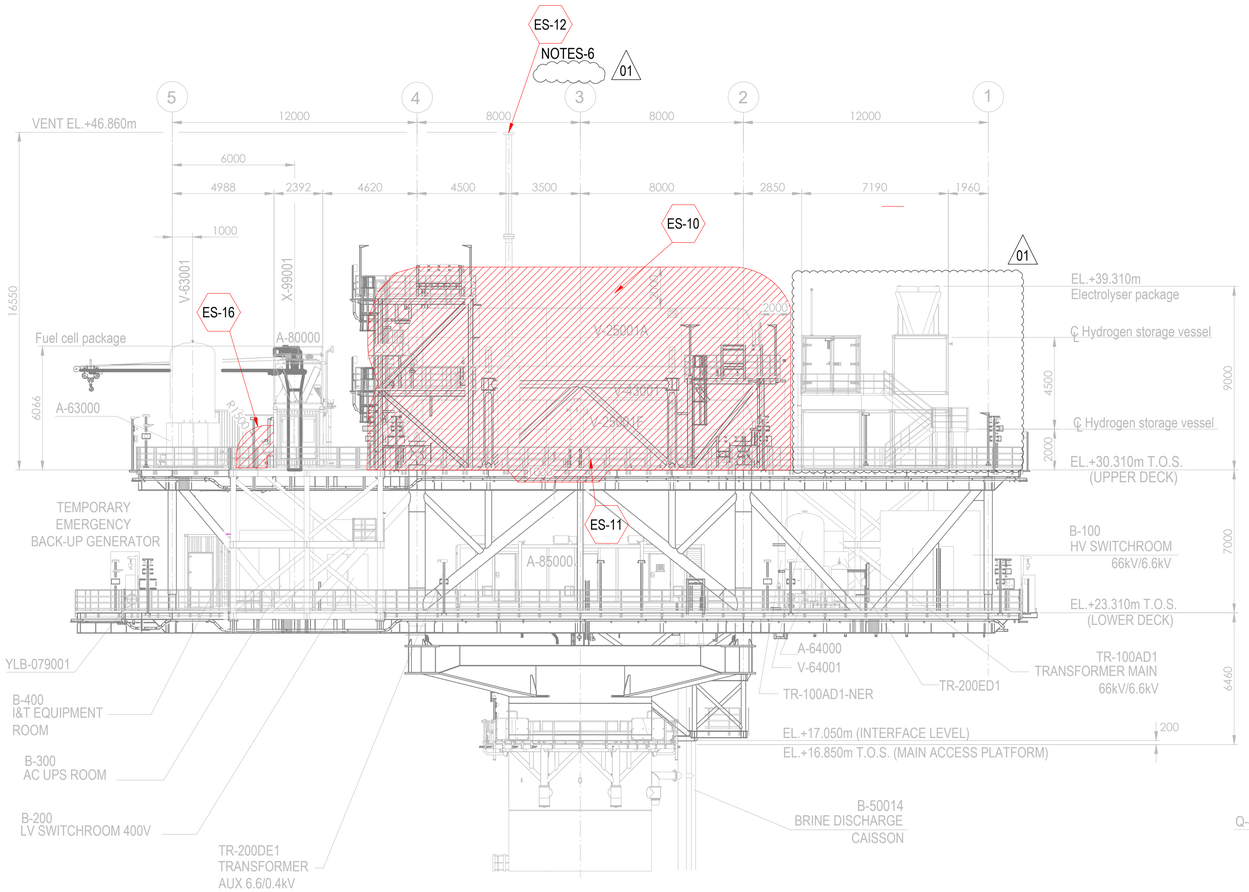
TITLE : BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30022	SHEET 001	REV. 01

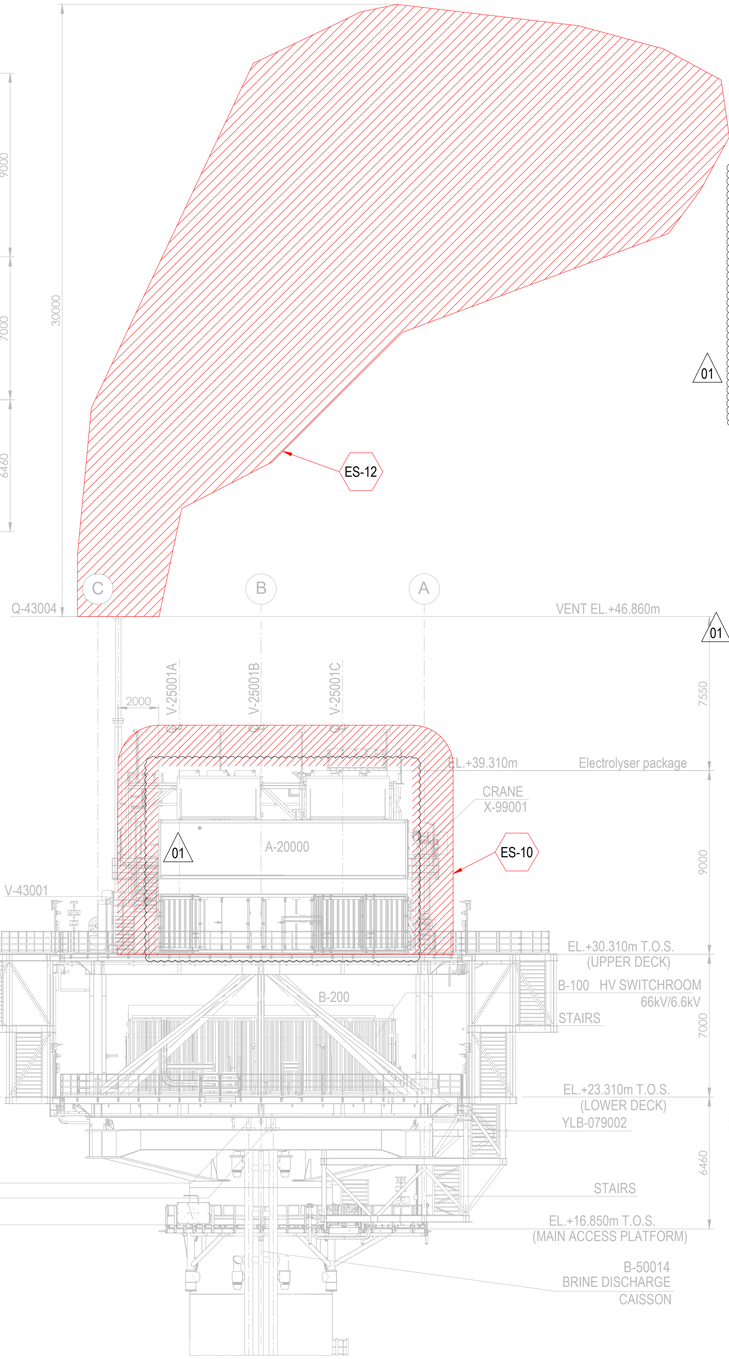
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 01



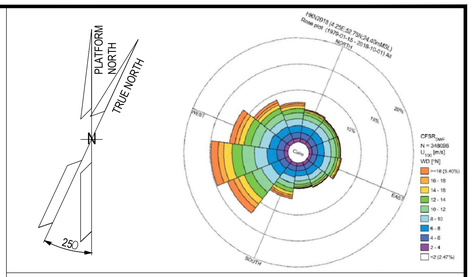
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

01

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. (ES12) IS SHOWN ONLY ON ELEVATION LOOKING NORTH ON THIS LAYOUT
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

01

LEGEND

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

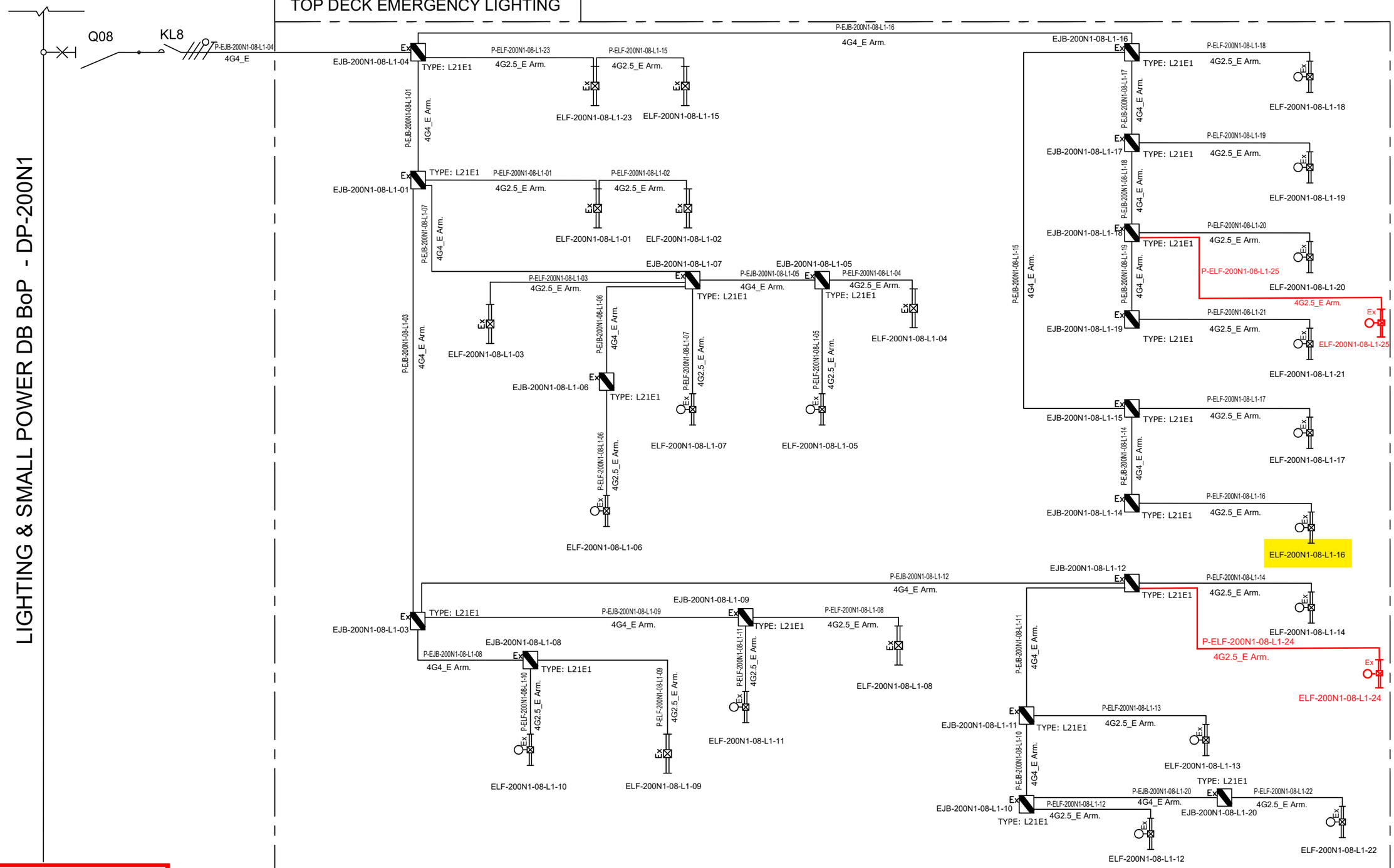
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30024	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30024 Rev.01

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

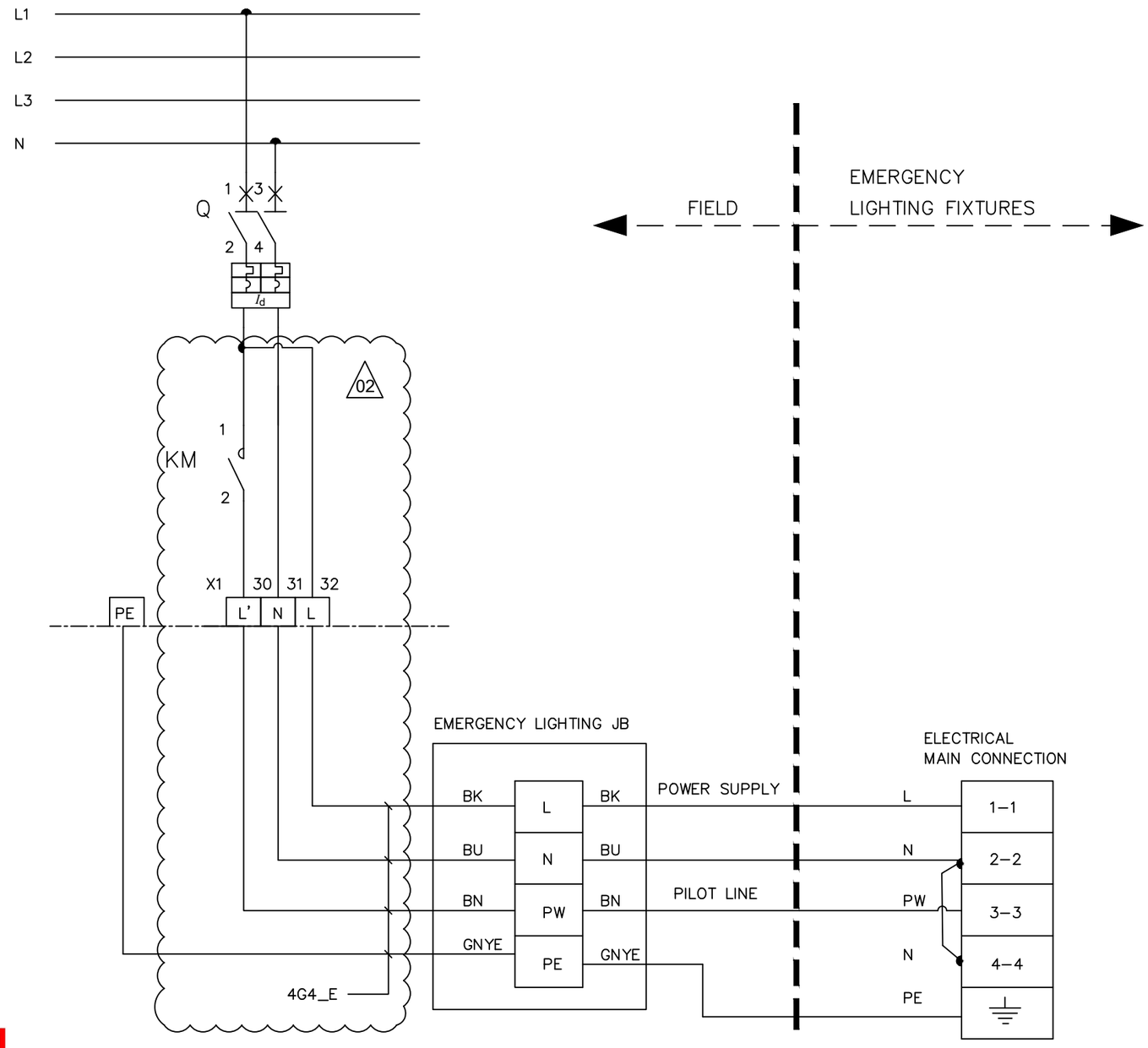
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

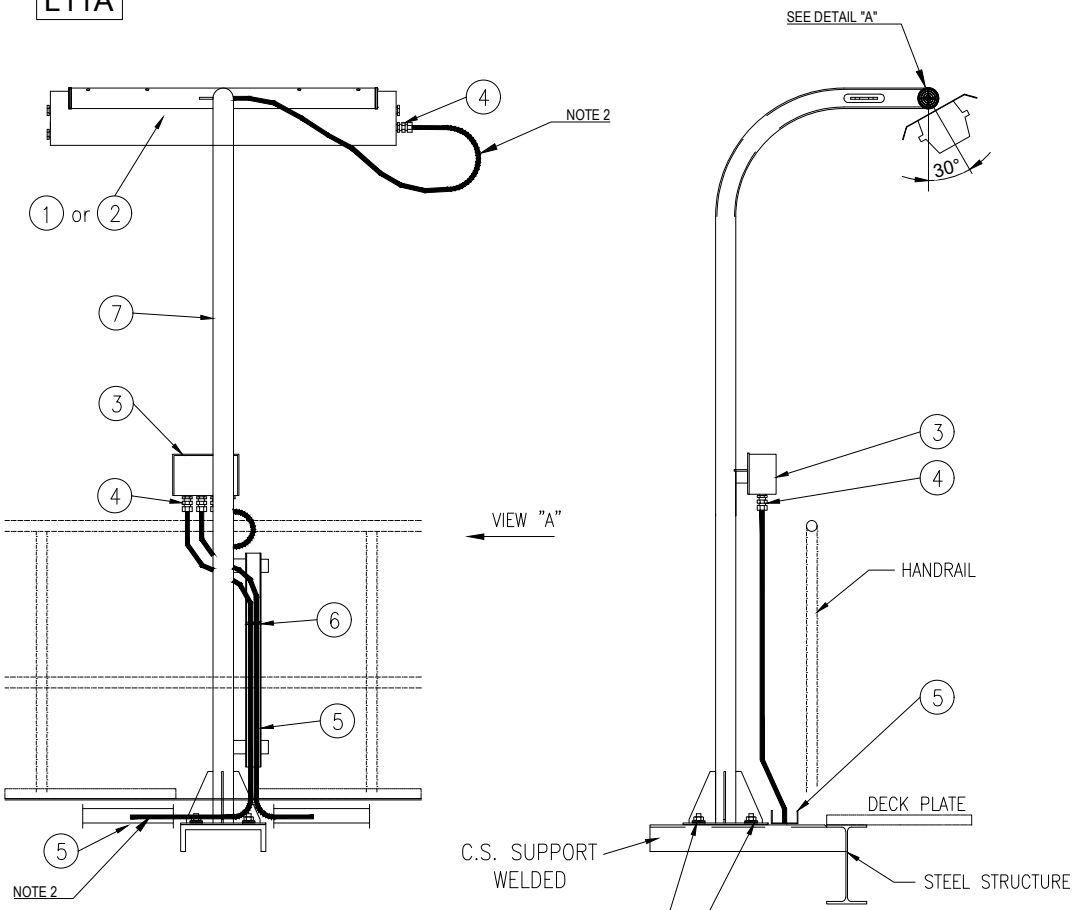
SHEET 014

REV. 02

F.to UNI A3: 420mmx297mm

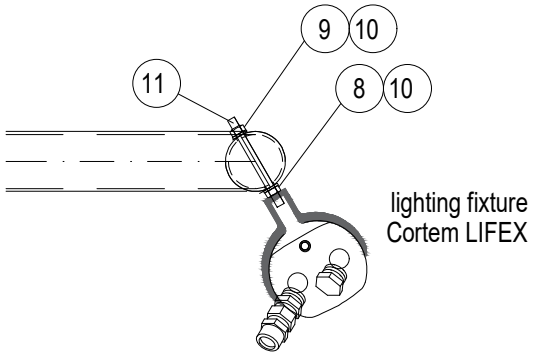
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L11A



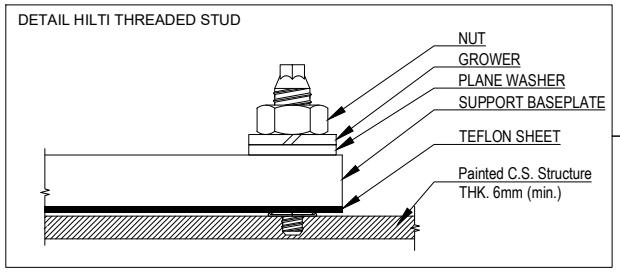
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

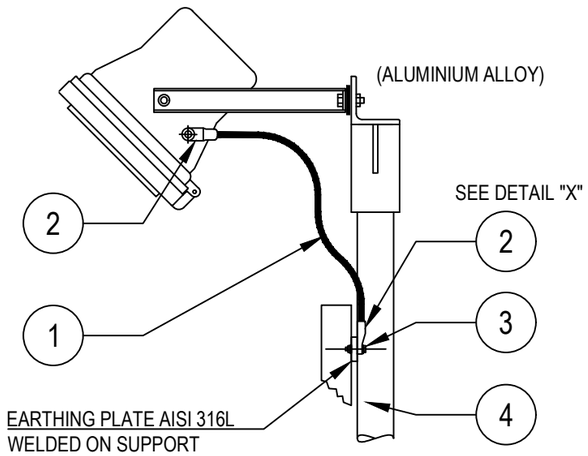
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

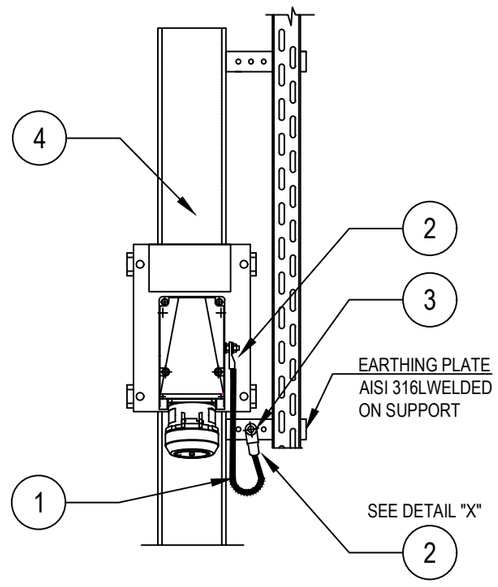
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

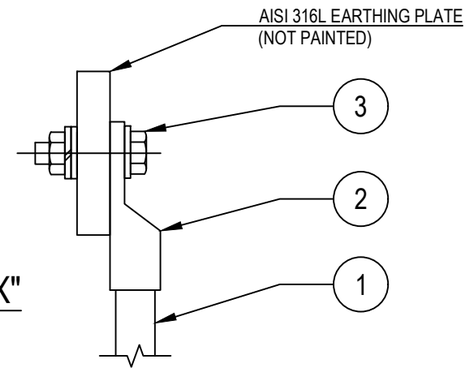
LIGHTING FIXTURE/GENERAL ITEM ON POLE



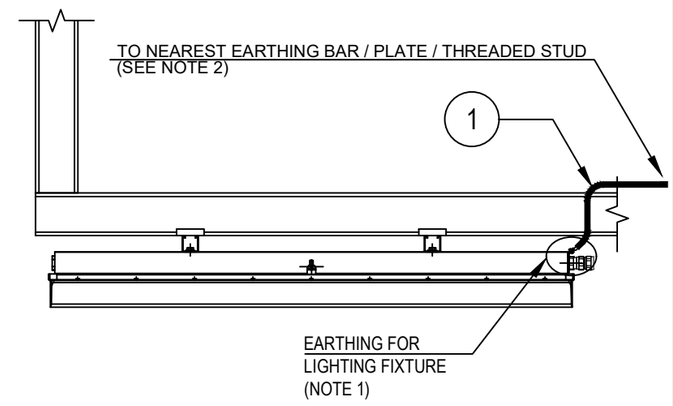
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_H	05/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

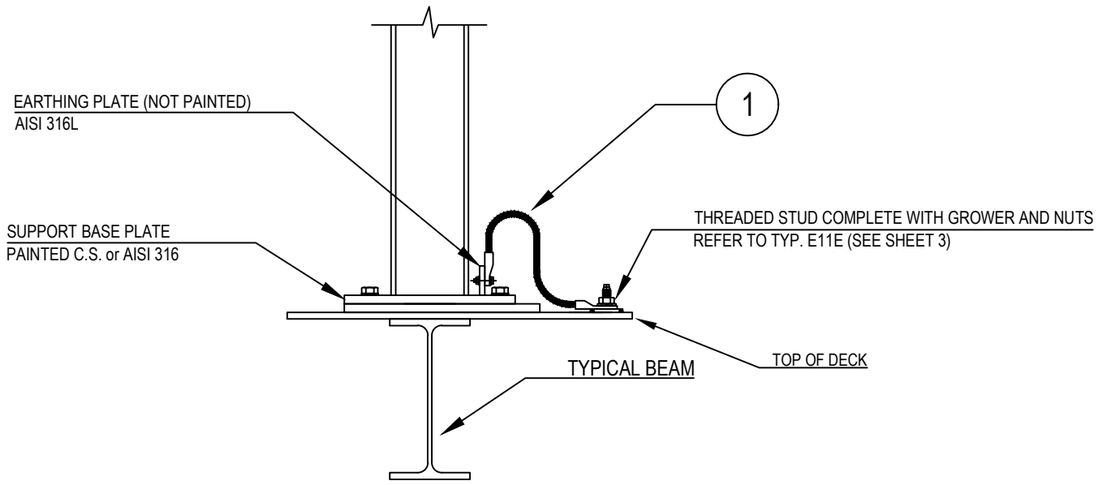
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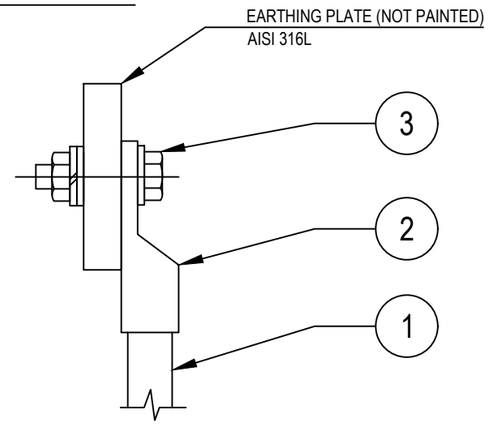
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_H	05/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

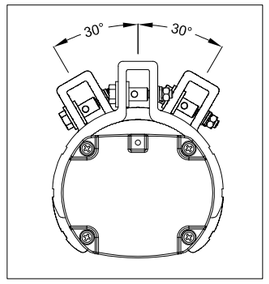
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

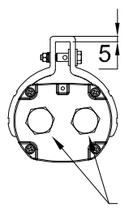
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

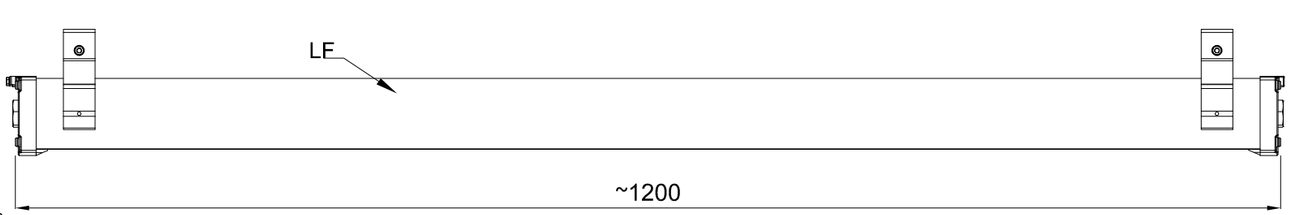
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

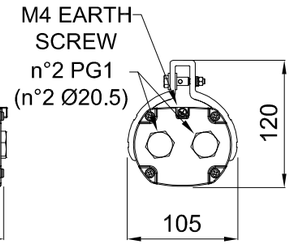


n°2 PG1
(n°2 Ø20.5)

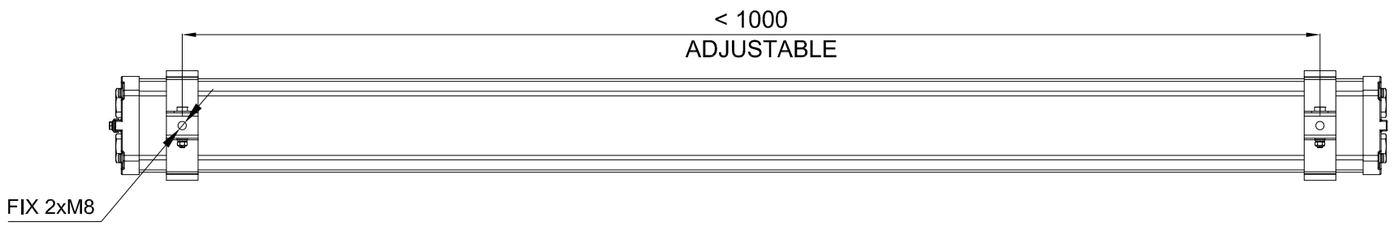
FRONT SIDE



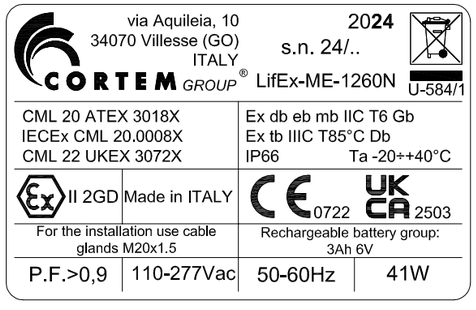
RIGHT SIDE (IN)



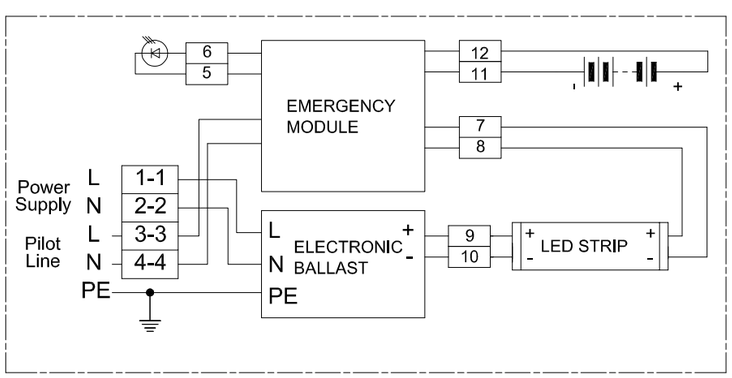
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

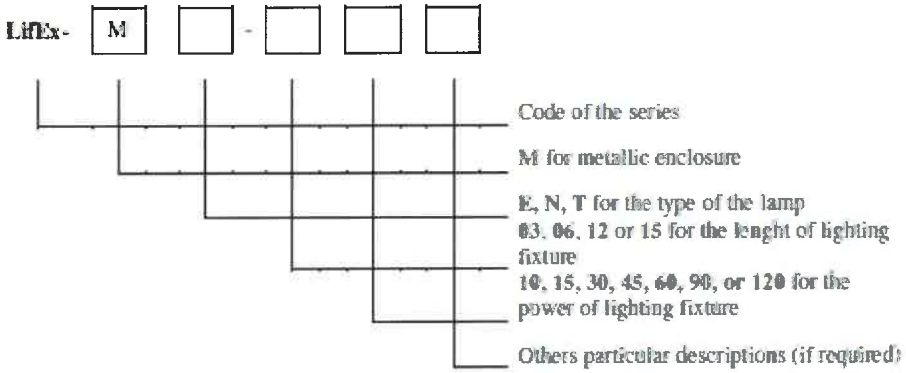
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

ITEM	Tag	EJB-200N1-08-L1-05	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001638	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990021			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-IECEx FIDI 21.0015X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-05	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001638		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	EJB-200N1-08-L1-05	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001638	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

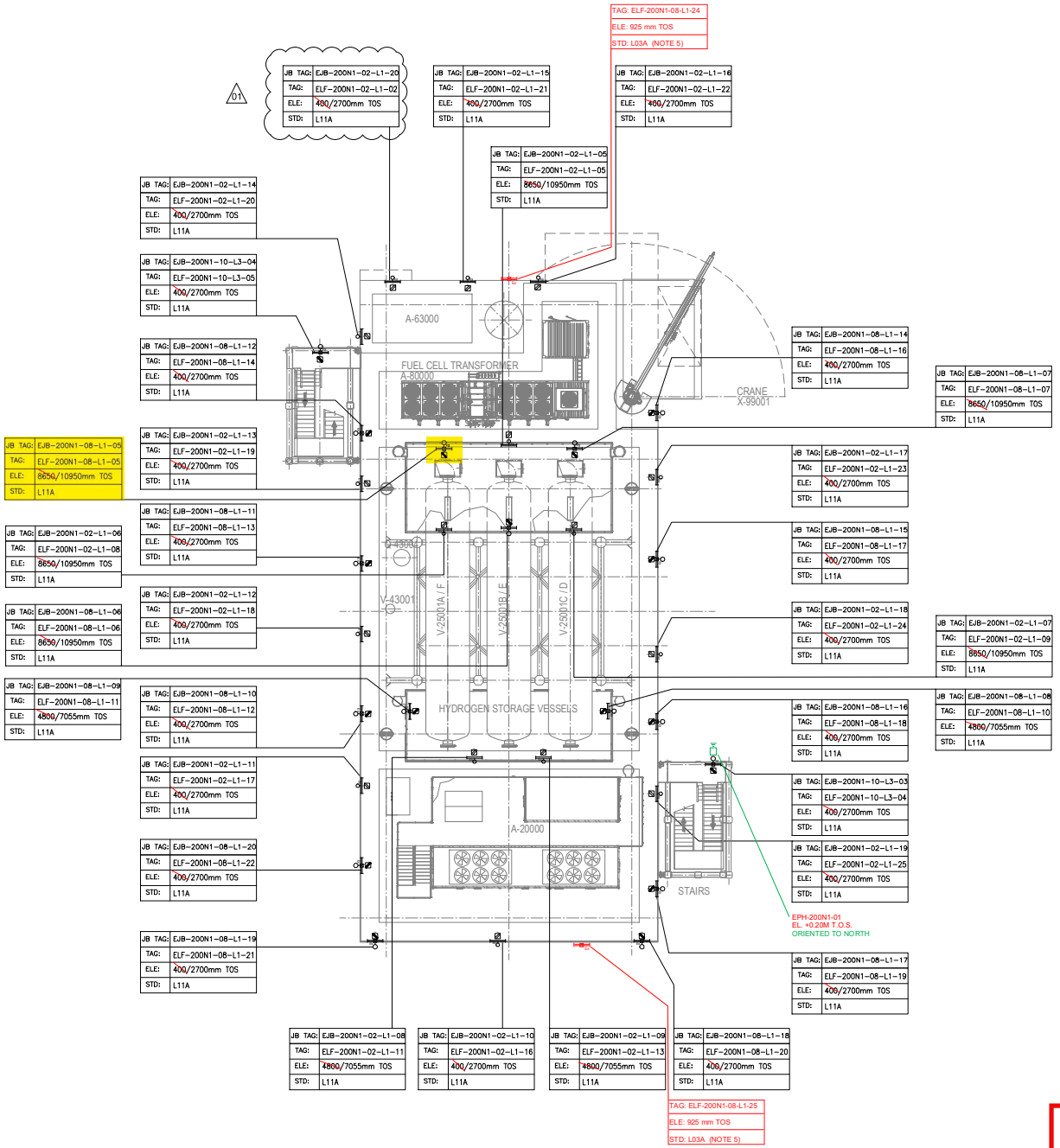
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

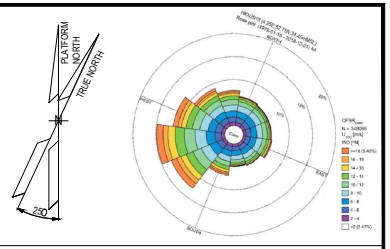
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-13	2025-01-20	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:01:03.146Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-20T12:30:31.747Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

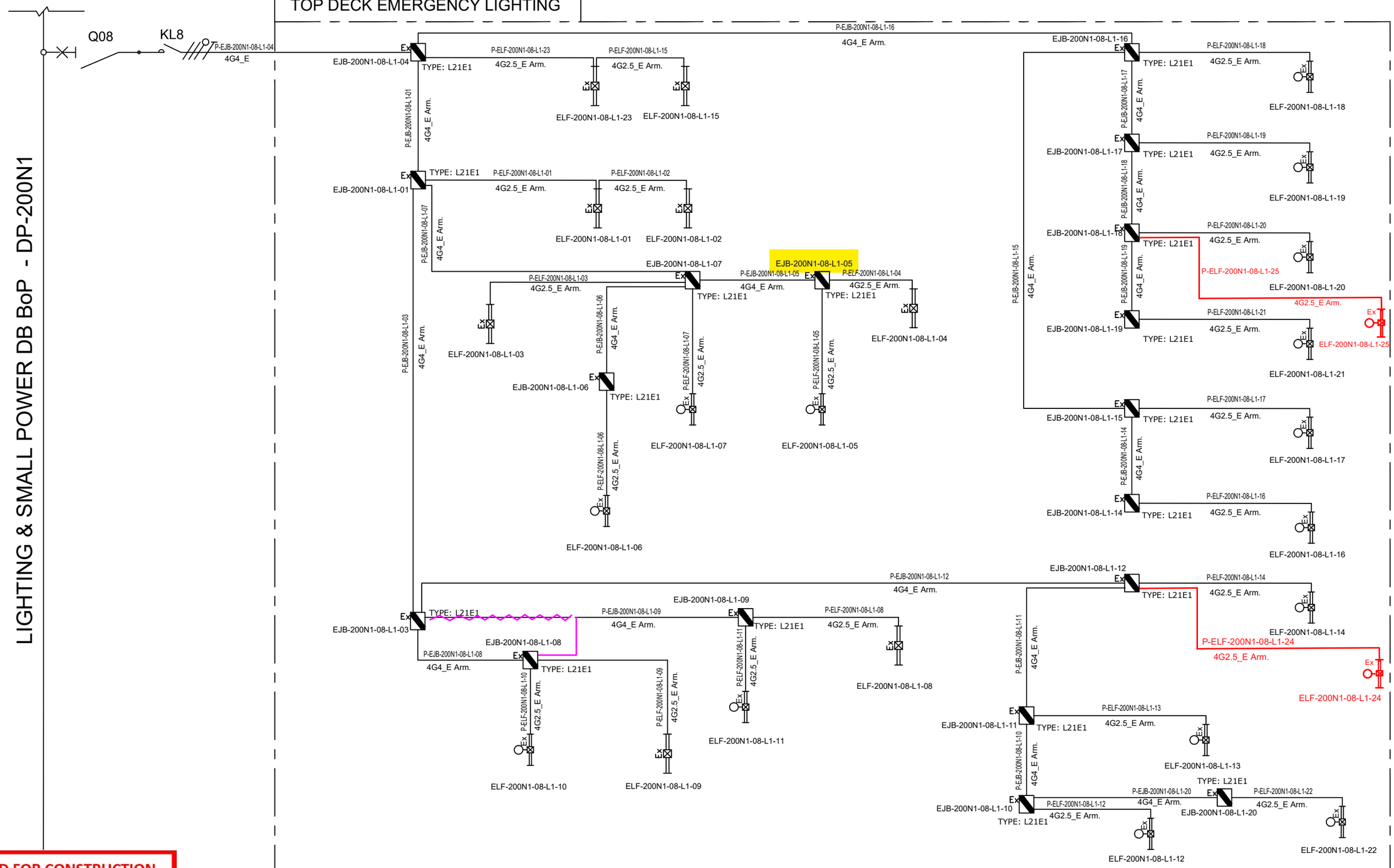
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

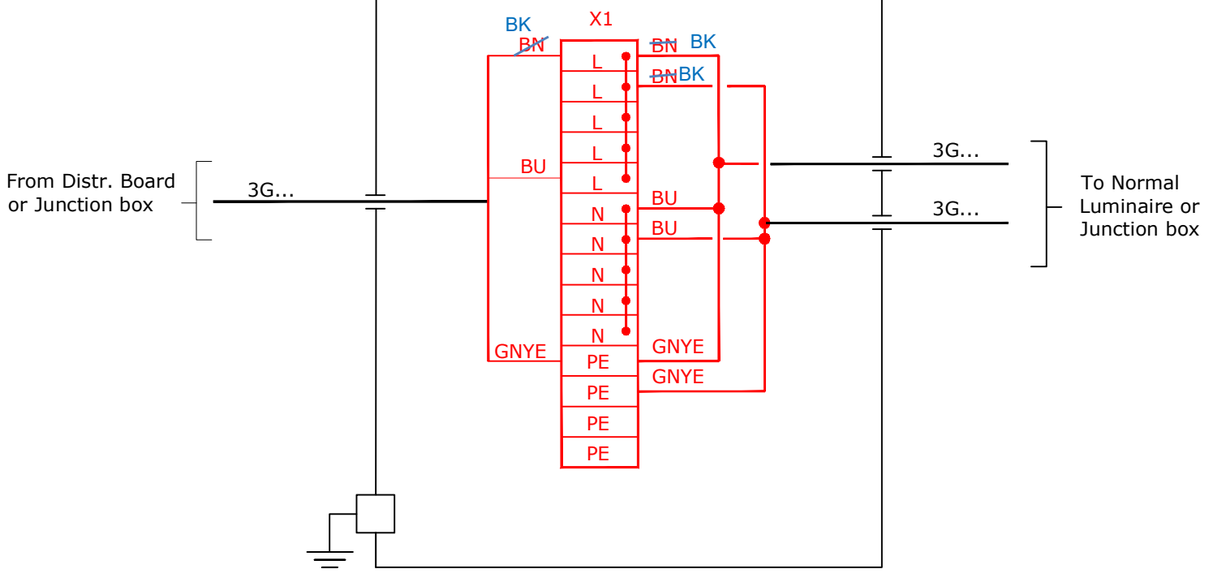
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

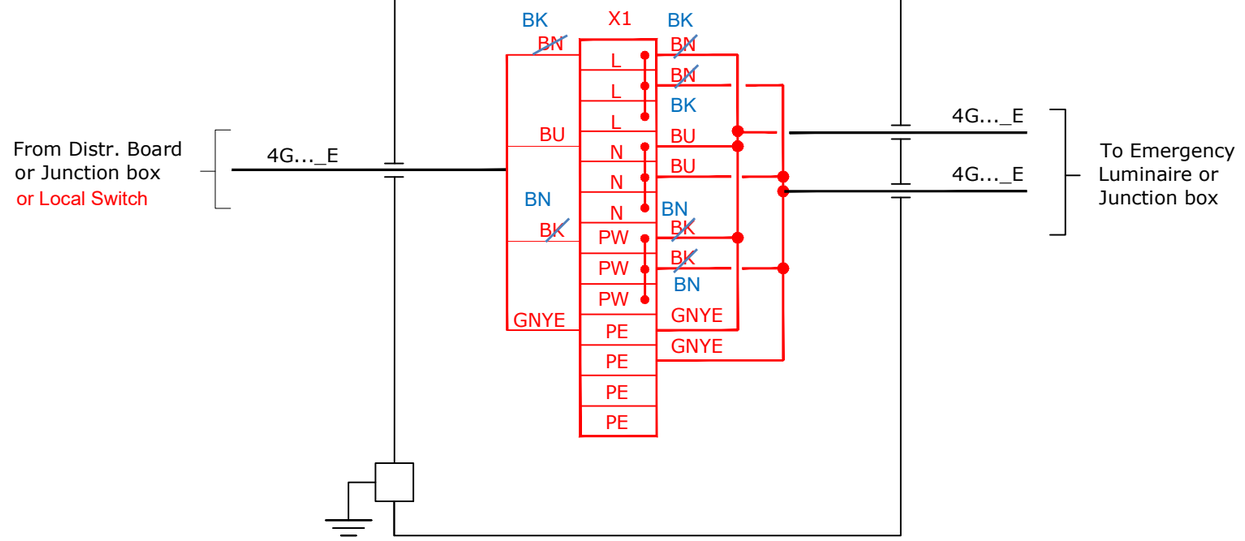
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

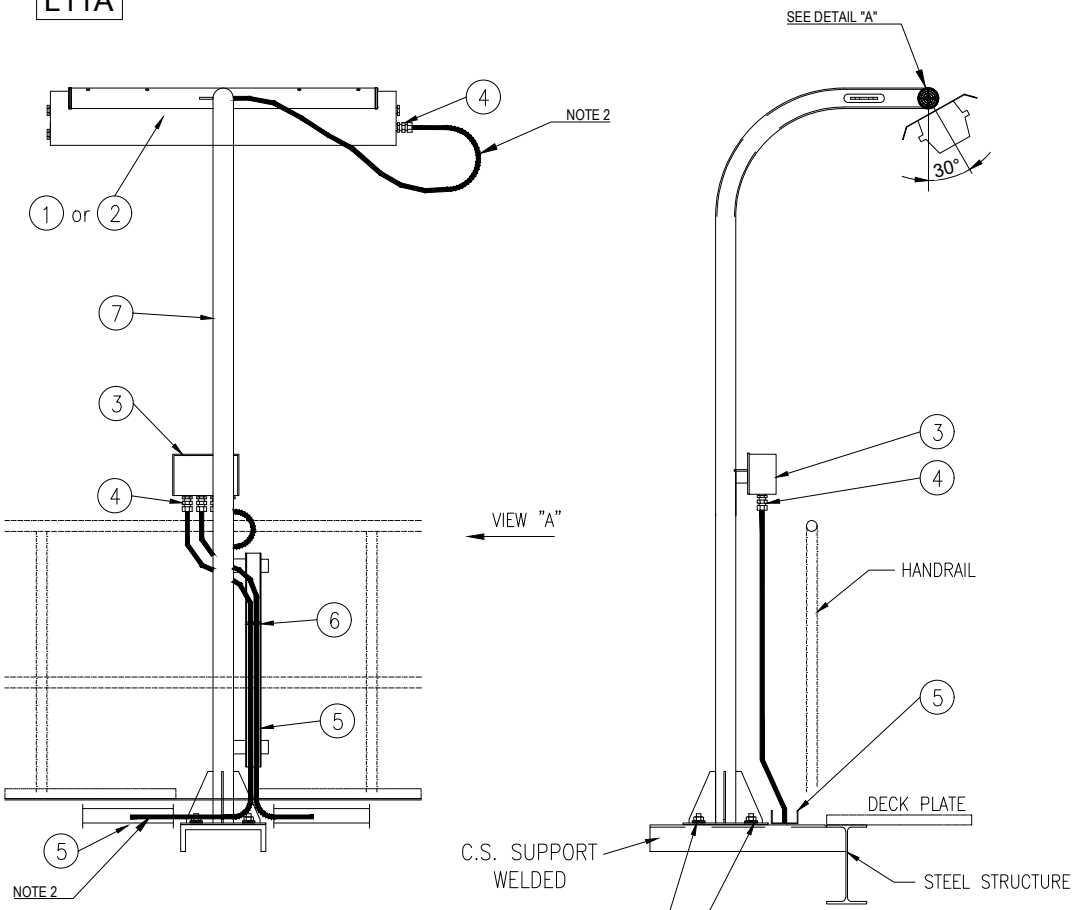
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

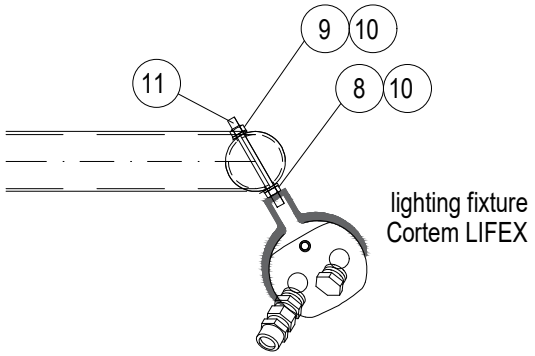
File Name : 123A90-DDL-EL-DG-20125

L11A



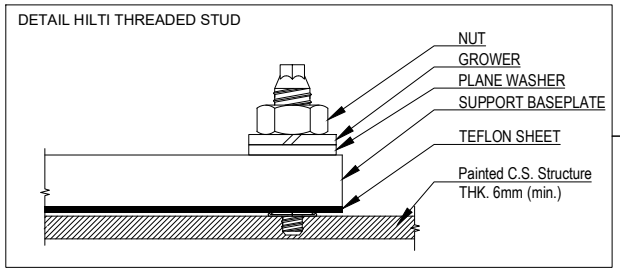
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

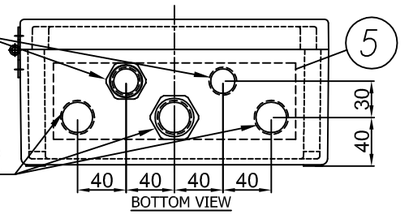
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

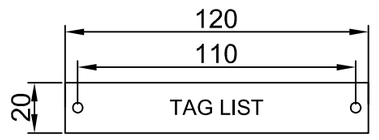
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

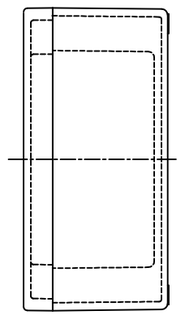
A002MAX

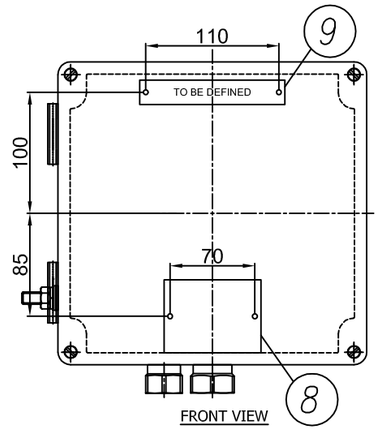
(9) PLATE DETAIL



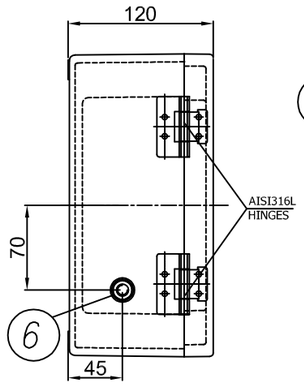
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

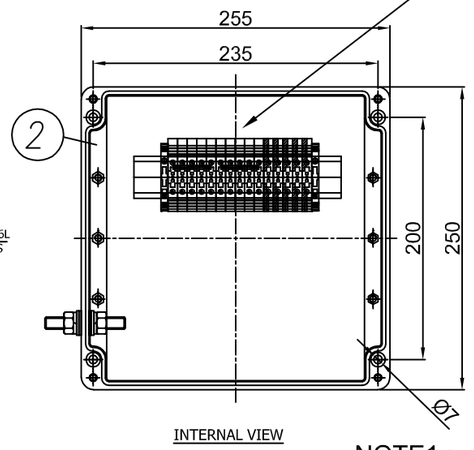

RIGHT VIEW



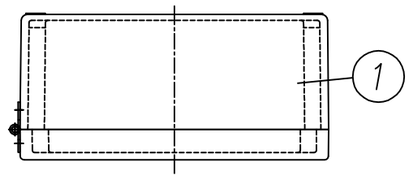
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

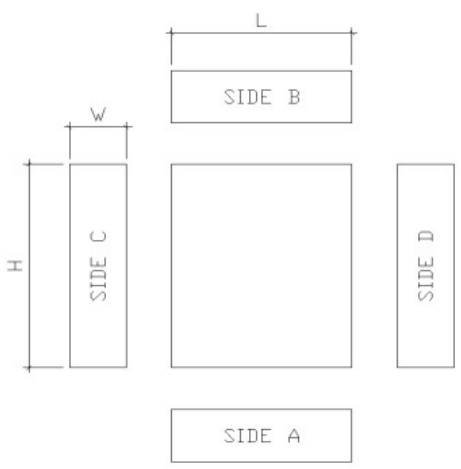
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

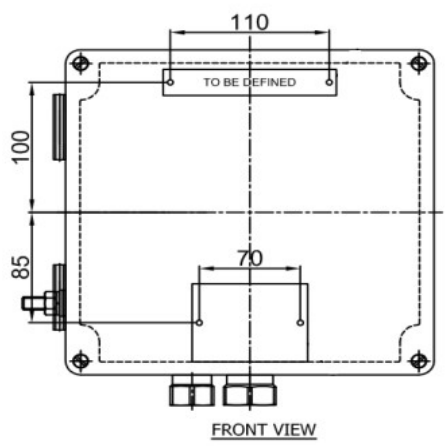
File Name : 1724001481-EL-DA-00003 Rev. 01

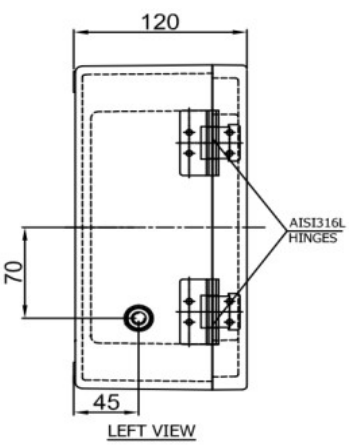
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
CB-200F4B	AC UPS F&G - Battery Isolator-B	CONTAINER B-300 (LOWER DECK)	1724000372	3W Power	Cortem Spa		EJBC	Zone 1	EPT 20 ATEX 4075X	1724000372-EL-DG-00011	II 2GDEx db IIC T6 Gb Ex tb IIIC T 85°C Db	-	N/A	True	N/A	False	
EAT-200N1-01	Trace Heating - Remote Ambient Thermostat	LOWER DECK	1724001647	nVent	nVent	1244-022663	ETS-05-A2-E-A	Zone 1	Baseefa 13ATEX0137	1724001647-EL-DD-00004	II 2(1)G Ex eb ia mb [ia Ga] IIC T5 Gb - 40ºC ≤ Ta ≤ +60ºC II 2D Ex tb IIIC T100ºC Db	-	N/A	True	N/A	False	
EHT-1001-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1002-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1003-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-B	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1005-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1006-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1007-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-2002-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EJB-200F2-01	Top Obstruction Lights Junction Box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990082	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
EJB-200F2-02	Intermediate obstruction lights junction box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990083	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_4
EJB-200N1-02-L1-01	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990045	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-02	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990044	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-03	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990043	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-02-L1-05	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990058	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-06	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990057	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-07	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990059	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-08	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990060	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-09	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990061	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-10	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990047	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-11	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990056	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-12	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990055	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-13	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990054	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-14	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990053	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-15	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990052	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-16	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990051	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-17	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990050	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-18	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990049	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-19	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990048	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-20	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990072	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-01	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990003	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-02	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990004	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-03	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990002	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-04	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990001	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-05	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990012	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-06	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990011	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-07	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990010	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-08	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990009	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-09	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990008	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-10	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990007	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-11	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990006	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-12	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990005	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-13	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990014	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-14	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990013	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-01	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990032	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-02	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990033	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-01	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990064	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-03	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990062	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-08-L1-04	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990065	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-05	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990077	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-06	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990078	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

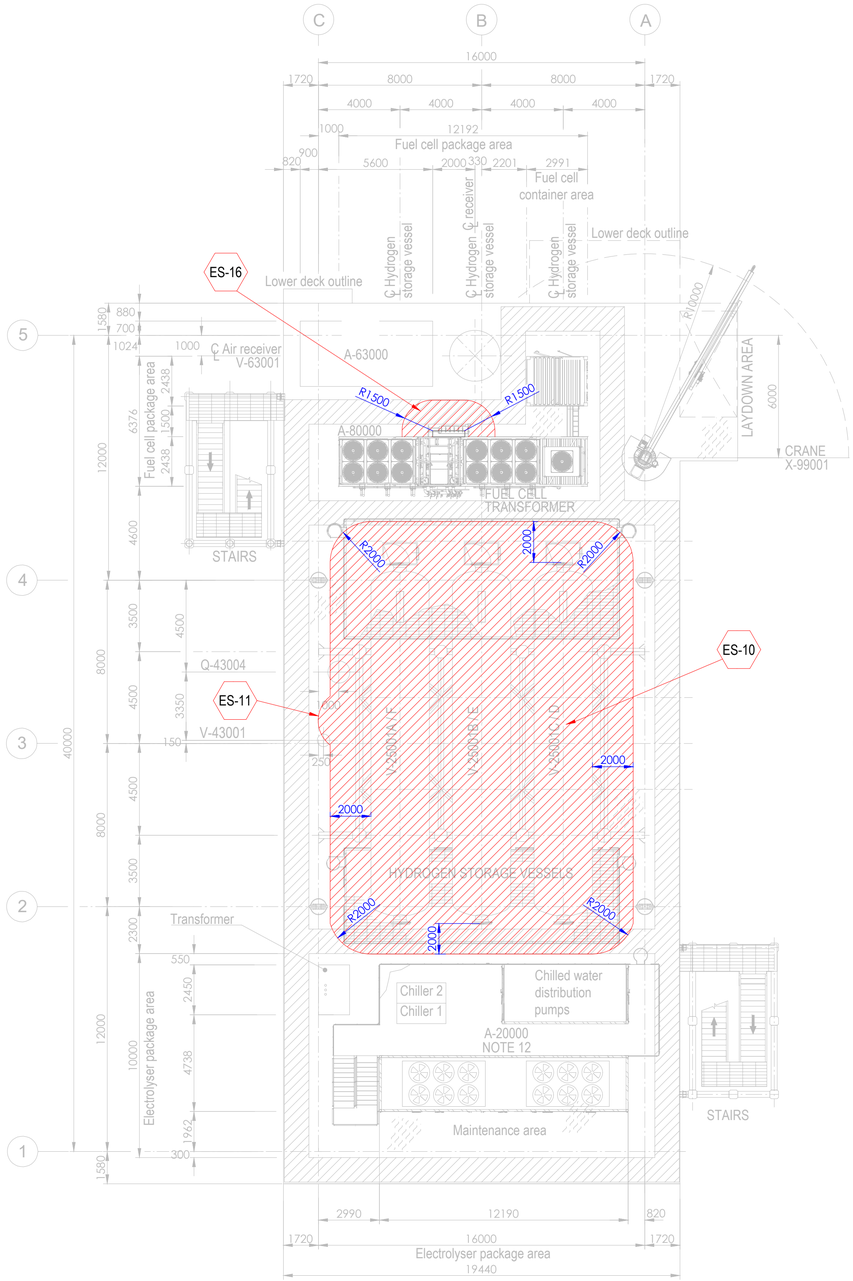
[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

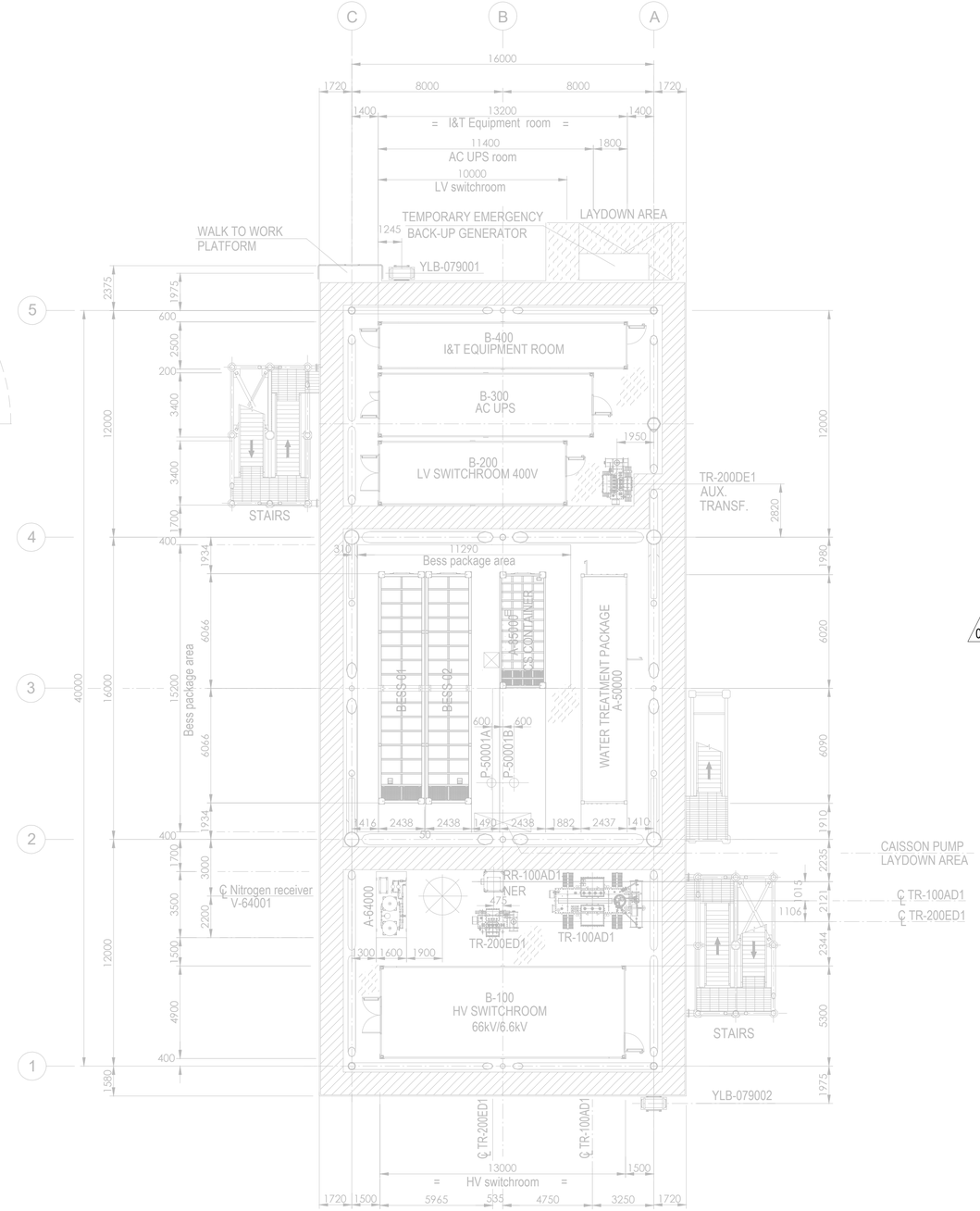
Fiditas Ltd. Slavka Tomerlina 44, 10361 Zagreb-Sesvete, Croatia
Phone: +385 1 5578565; info@fiditas.com ; www.fiditas.com

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



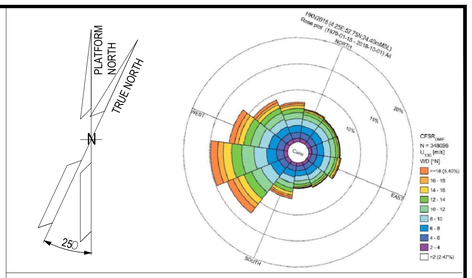
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

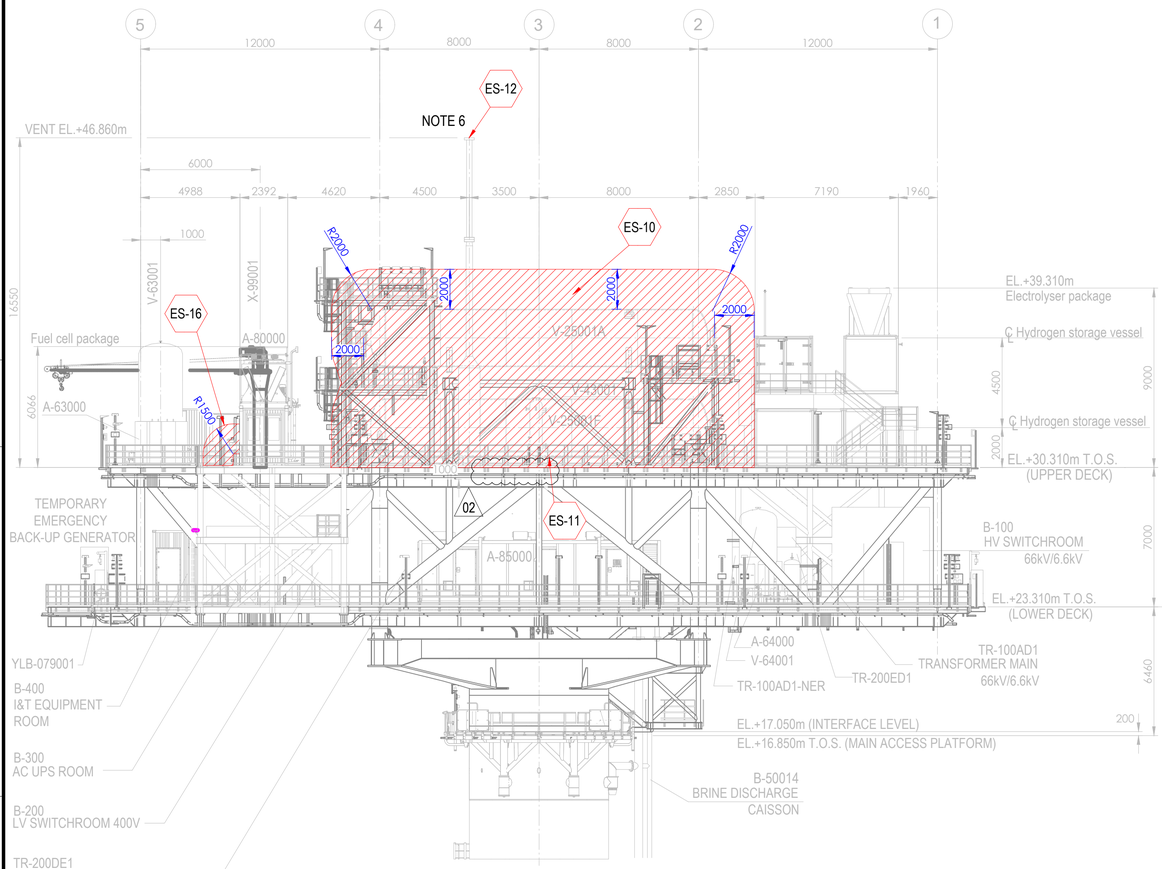
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

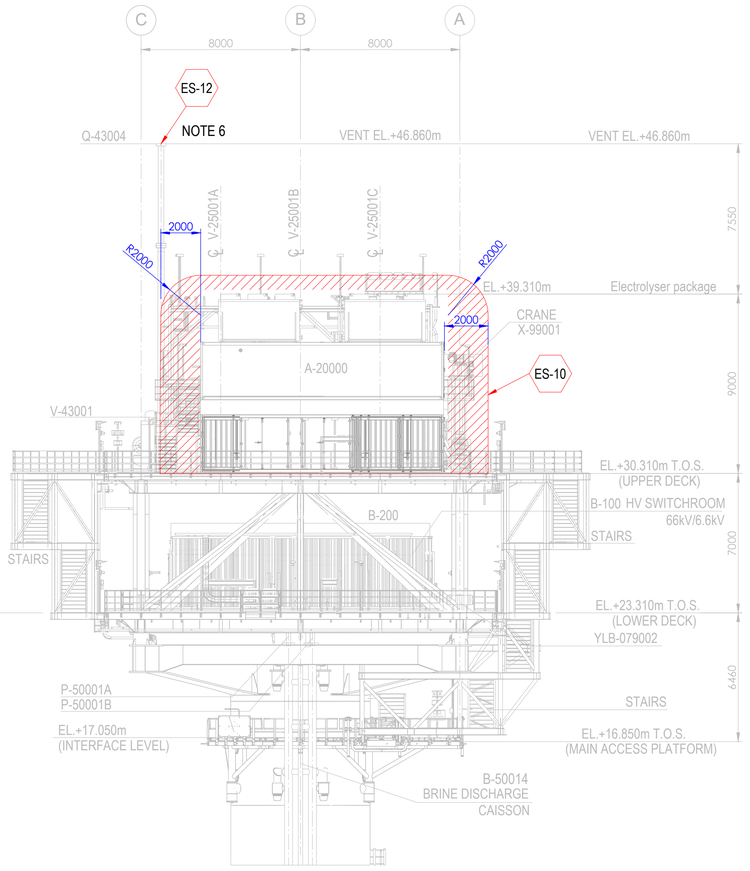
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

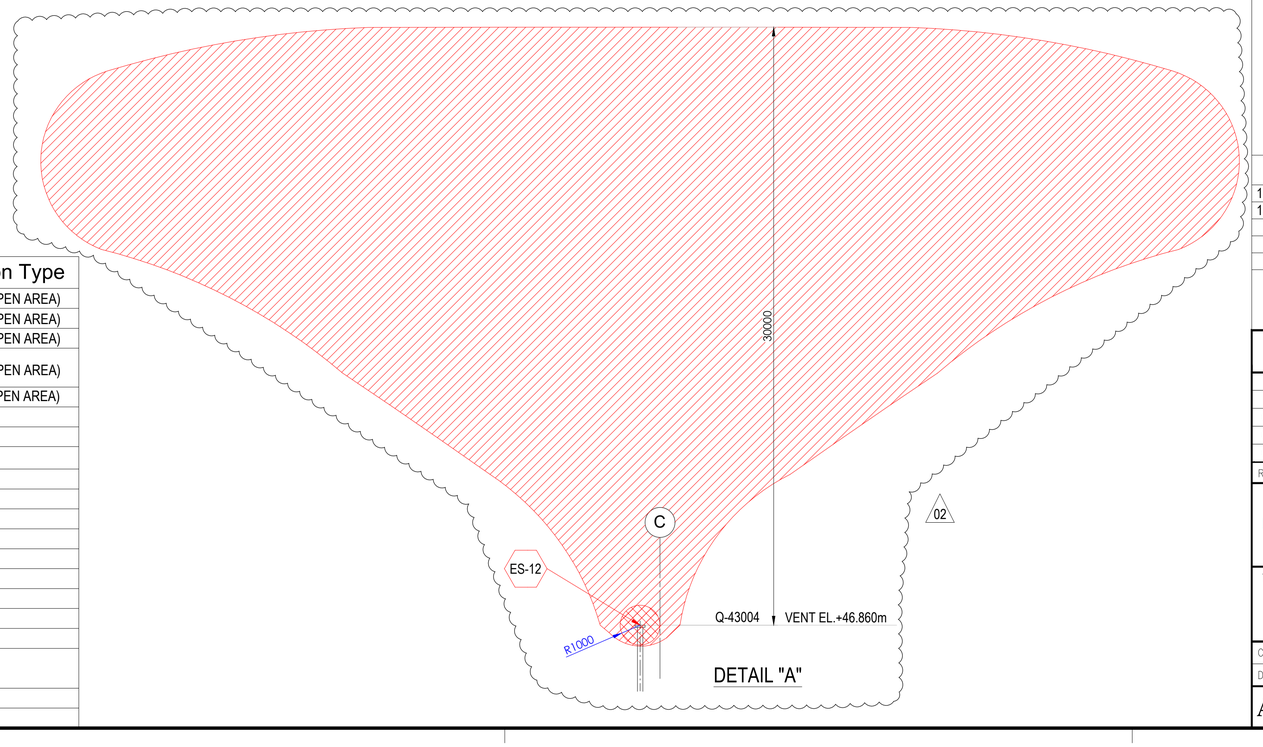


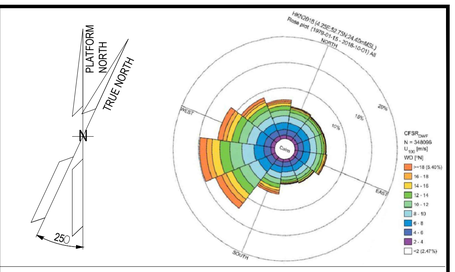
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-06	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001639	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990022			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-ECEx FIDI 21.0015X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-06	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001639		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	EJB-200N1-08-L1-06	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001639		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

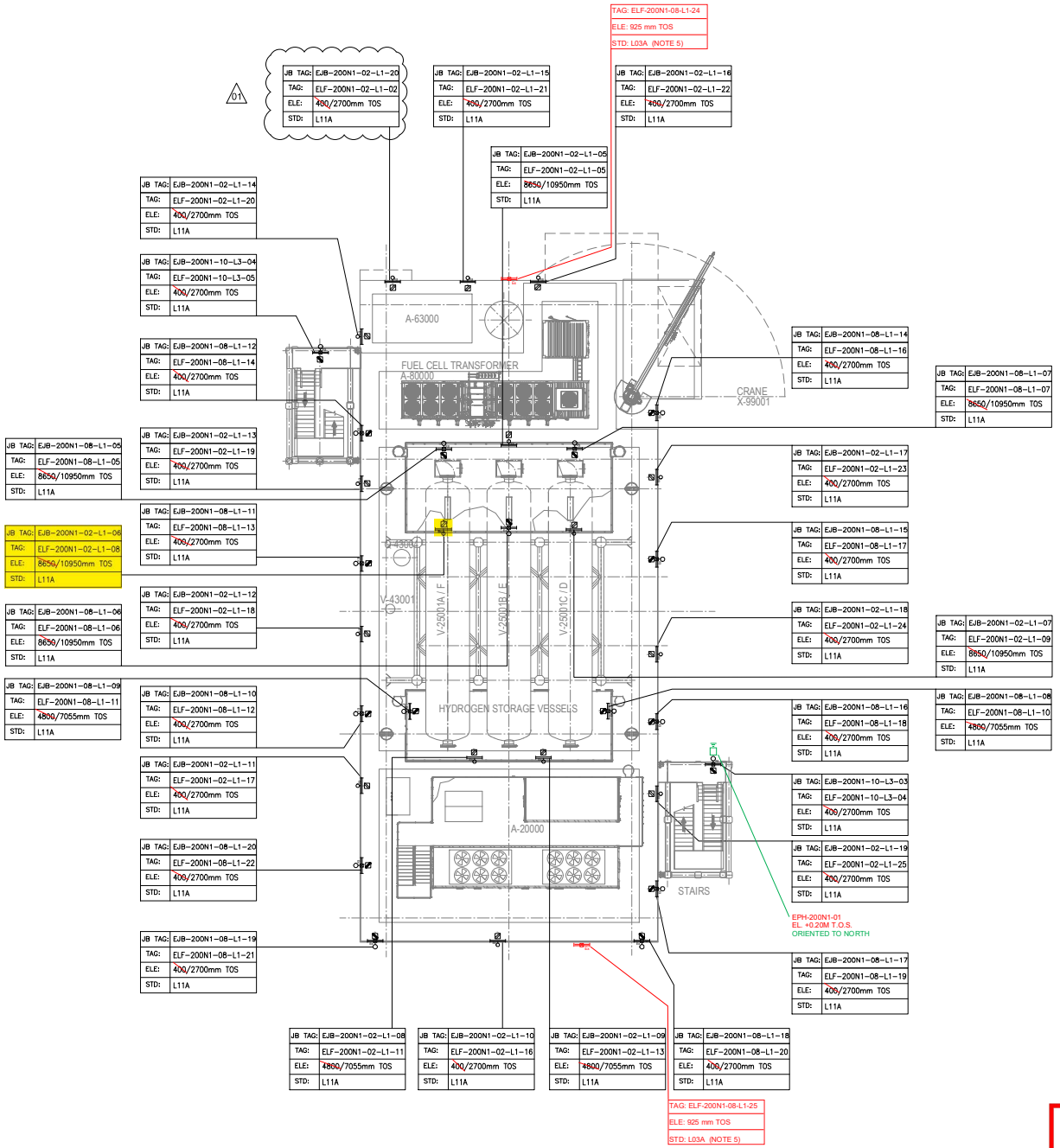
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

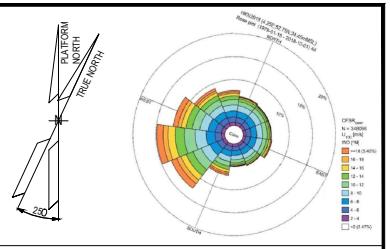
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-13	2025-01-20	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:01:22.783Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-20T16:32:56.524Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

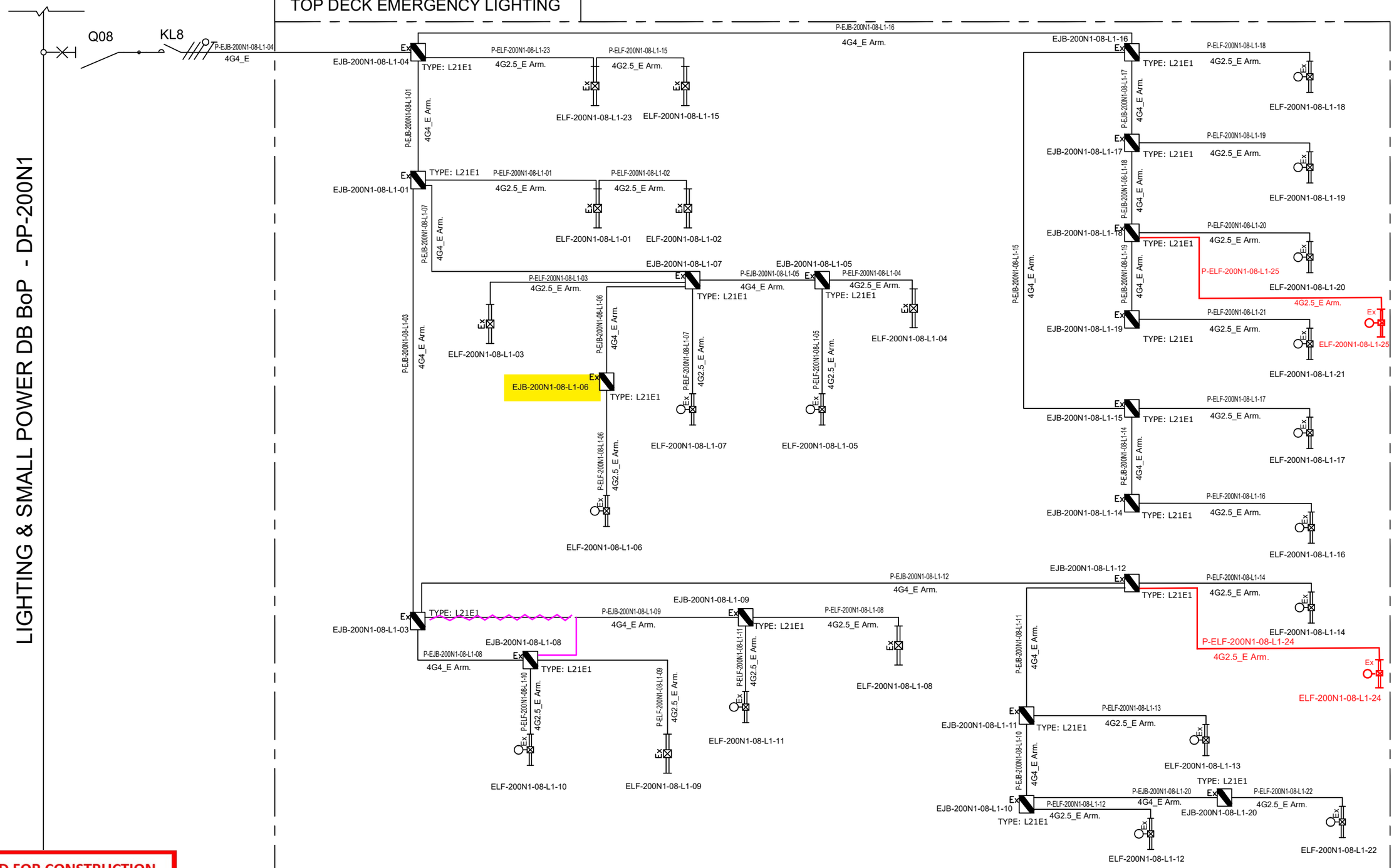
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

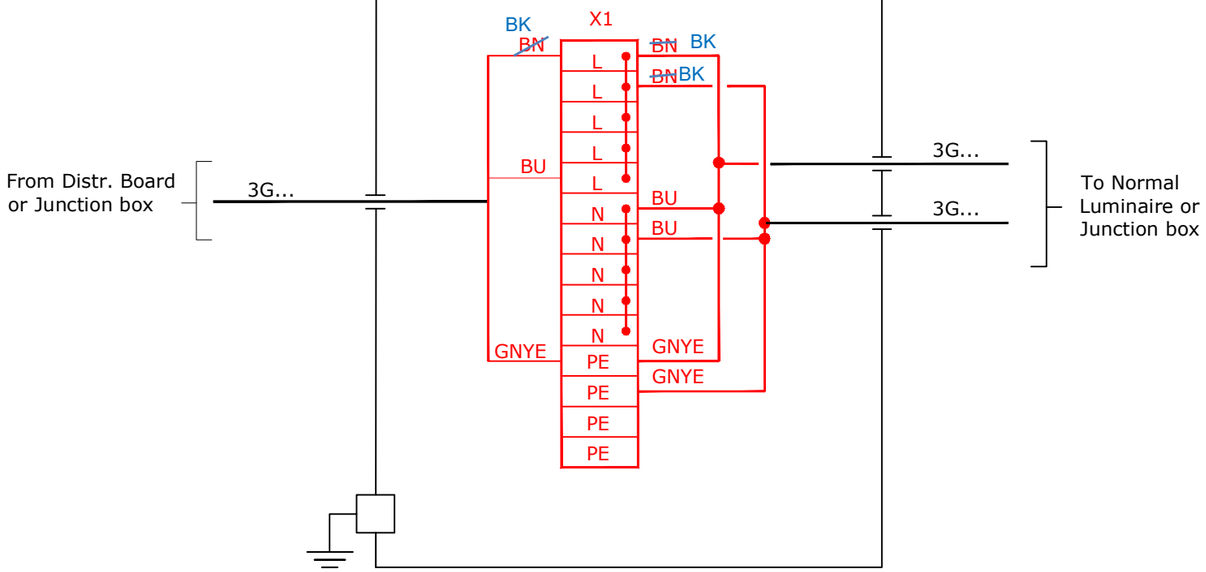
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

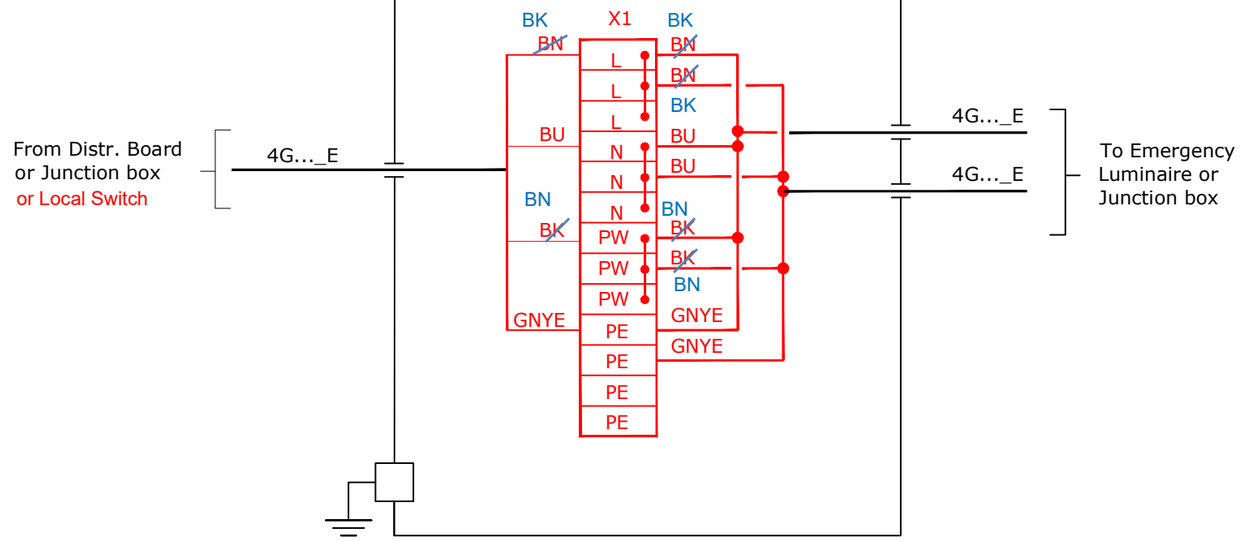
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

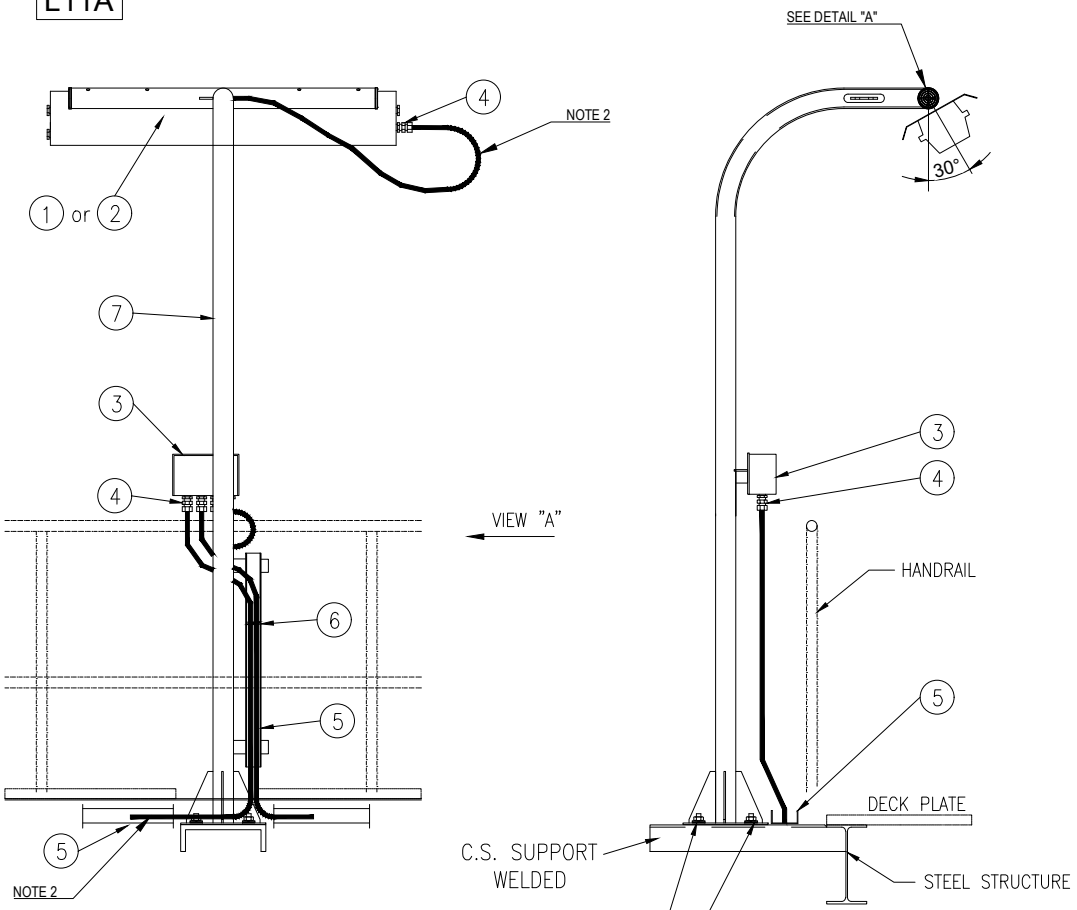
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

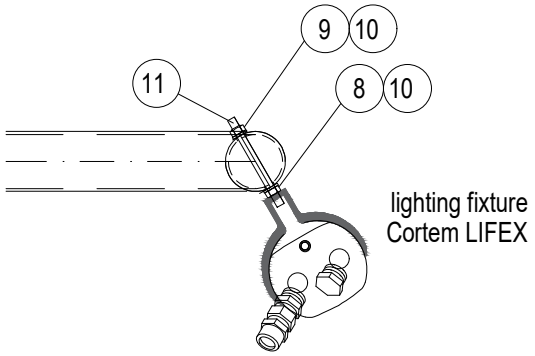
File Name : 123A90-DDL-EL-DG-20125

L11A



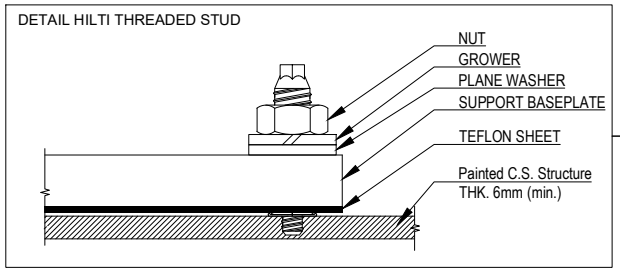
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

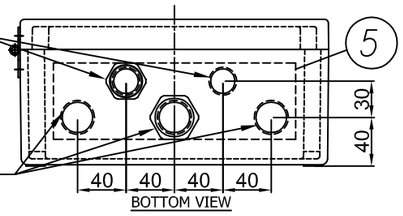
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

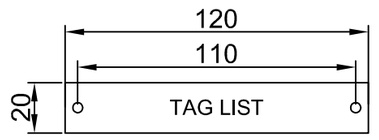
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

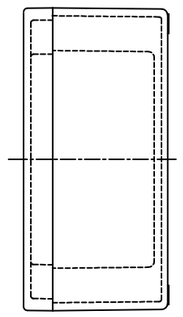
A002MAX

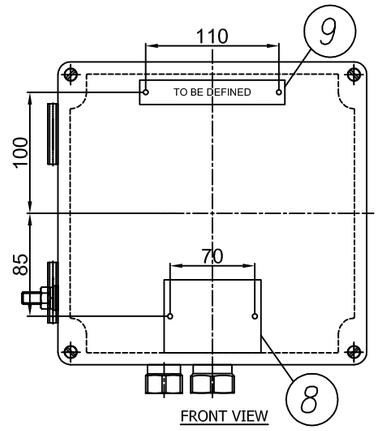
(9) PLATE DETAIL



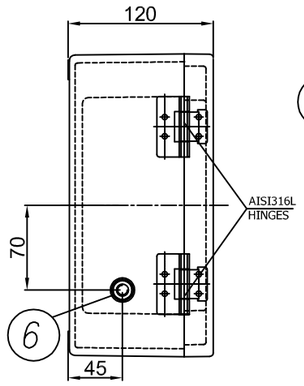
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

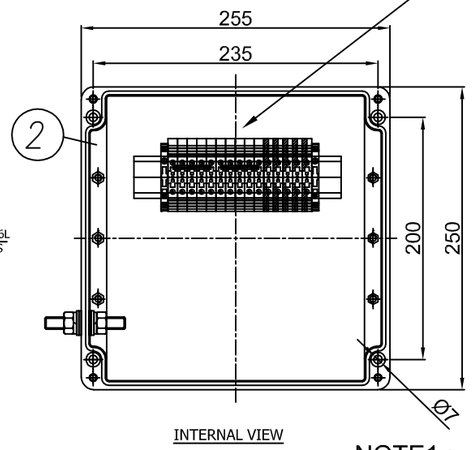

RIGHT VIEW



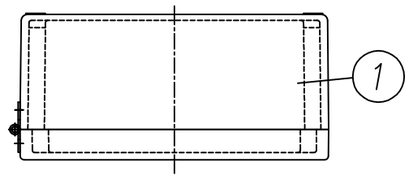
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

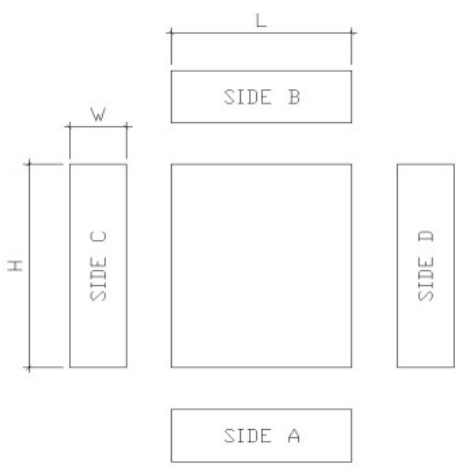
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

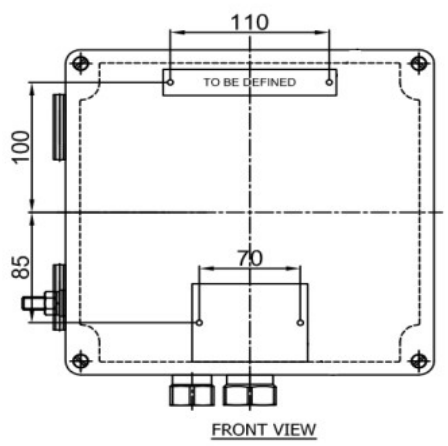
File Name : 1724001481-EL-DA-00003 Rev. 01

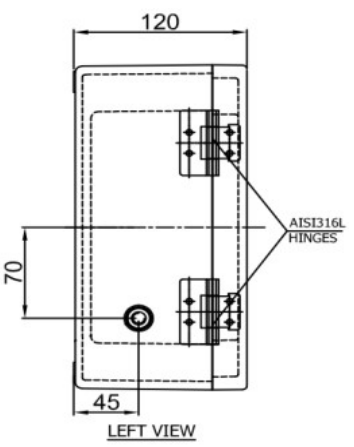
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
CB-200F4B	AC UPS F&G - Battery Isolator-B	CONTAINER B-300 (LOWER DECK)	1724000372	3W Power	Cortem Spa		EJBC	Zone 1	EPT 20 ATEX 4075X	1724000372-EL-DG-00011	II 2GDEx db IIC T6 Gb Ex tb IIIC T 85°C Db	-	N/A	True	N/A	False	
EAT-200N1-01	Trace Heating - Remote Ambient Thermostat	LOWER DECK	1724001647	nVent	nVent	1244-022663	ETS-05-A2-E-A	Zone 1	Baseefa 13ATEX0137	1724001647-EL-DD-00004	II 2(1)G Ex eb ia mb [ia Ga] IIC T5 Gb - 40ºC ≤ Ta ≤ +60ºC II 2D Ex tb IIIC T100ºC Db	-	N/A	True	N/A	False	
EHT-1001-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1002-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1003-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-B	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1005-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1006-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1007-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-2002-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EJB-200F2-01	Top Obstruction Lights Junction Box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990082	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
EJB-200F2-02	Intermediate obstruction lights junction box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990083	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_4
EJB-200N1-02-L1-01	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990045	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-02	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990044	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-03	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990043	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-02-L1-05	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990058	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-06	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990057	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-07	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990059	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-08	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990060	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-09	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990061	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-10	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990047	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-11	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990056	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-12	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990055	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-13	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990054	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-14	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990053	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-15	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990052	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-16	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990051	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-17	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990050	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-18	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990049	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-19	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990048	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-20	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990072	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-01	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990003	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-02	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990004	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-03	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990002	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-04	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990001	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-05	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990012	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-06	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990011	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-07	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990010	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-08	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990009	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-09	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990008	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-10	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990007	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-11	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990006	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-12	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990005	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-13	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990014	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-14	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990013	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-01	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990032	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-02	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990033	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-01	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990064	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-03	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990062	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-08-L1-04	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990065	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-05	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990077	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-06	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990078	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	

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explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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This certificate may only be reproduced in its entirety, without any change, schedule included

[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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Fiditas
explosion safety solutions

17065 · HAA
3635

[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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This certificate may only be reproduced in its entirety, without any change, schedule included

[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

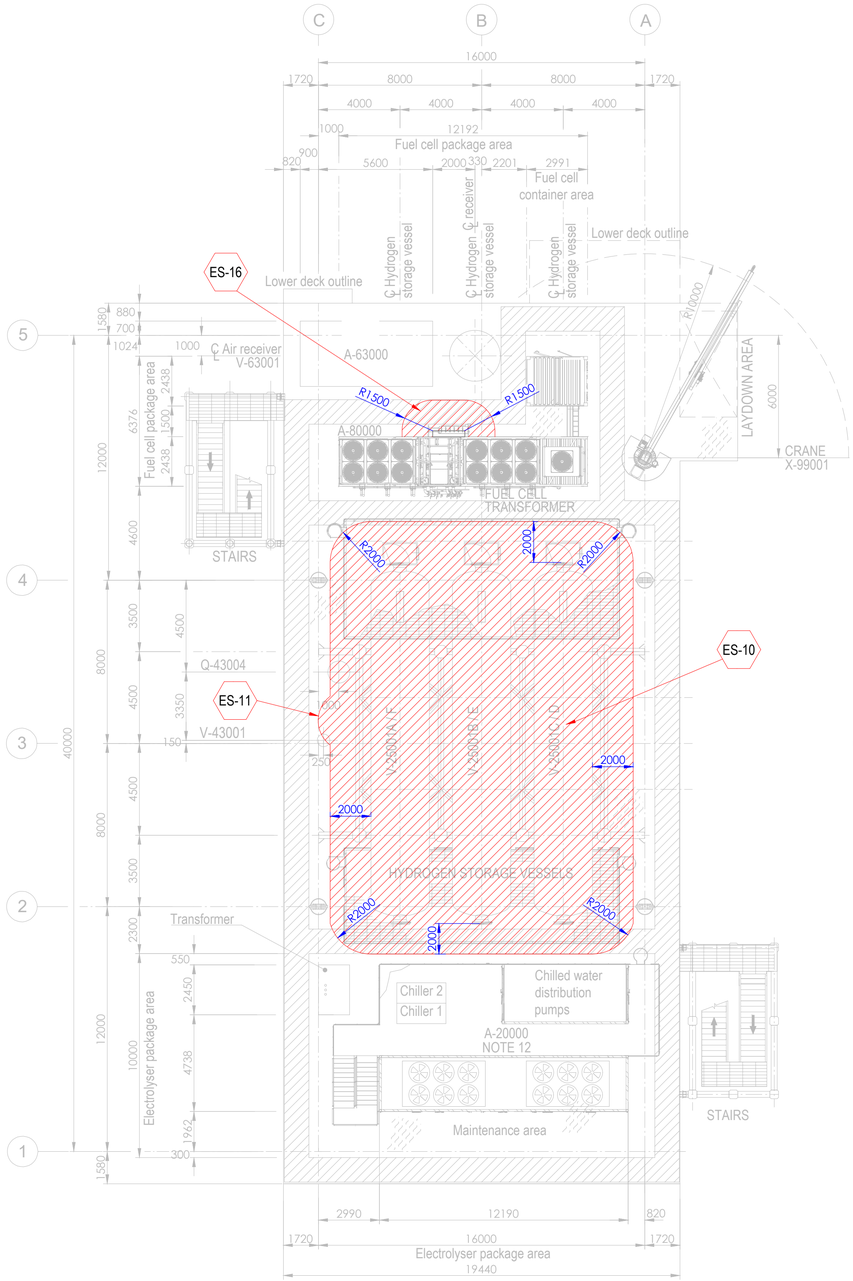
[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

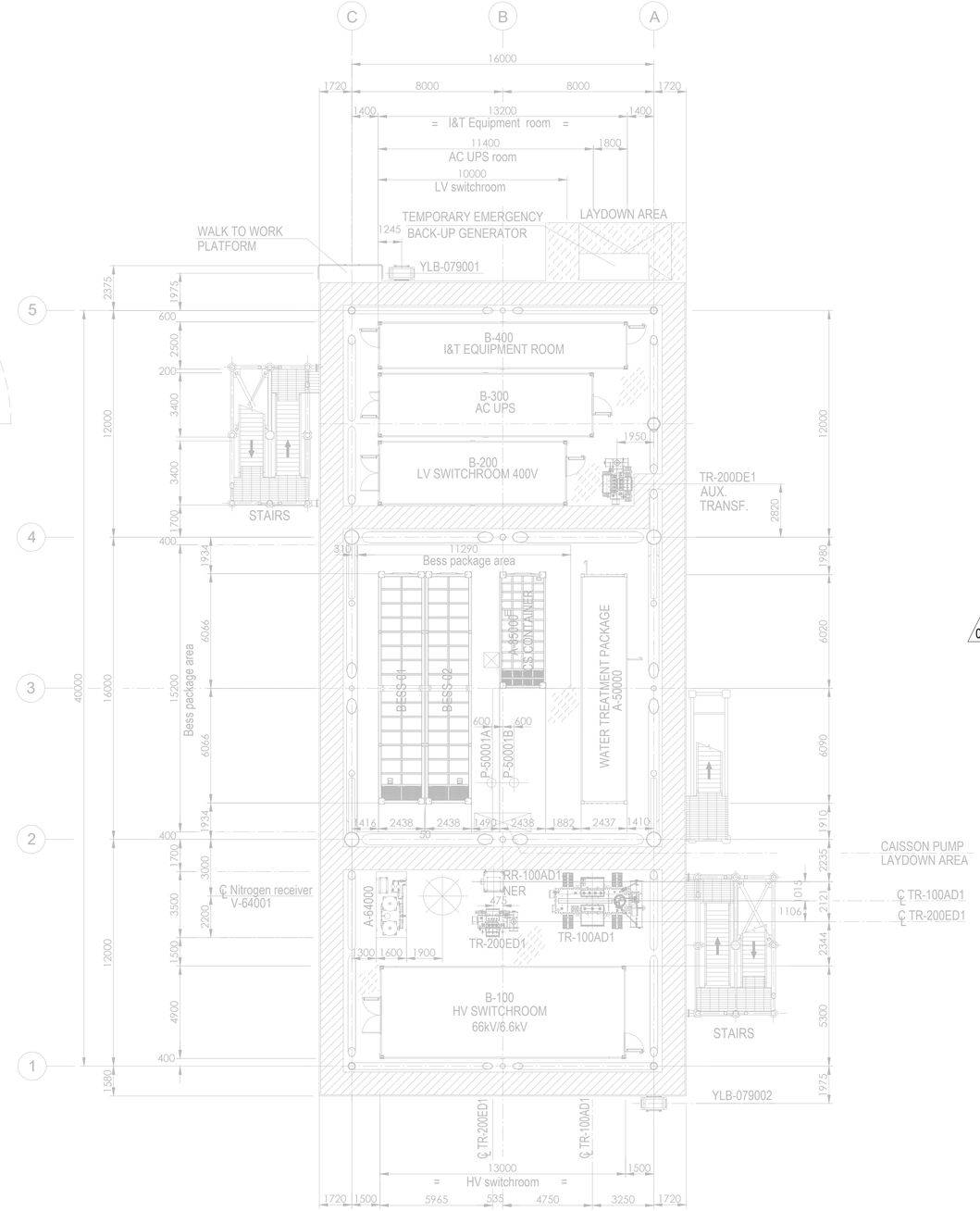
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



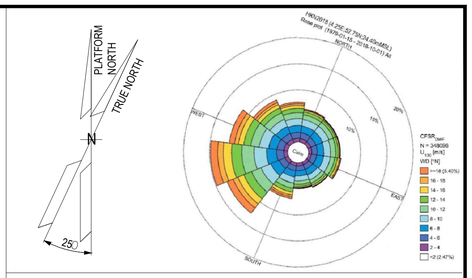
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

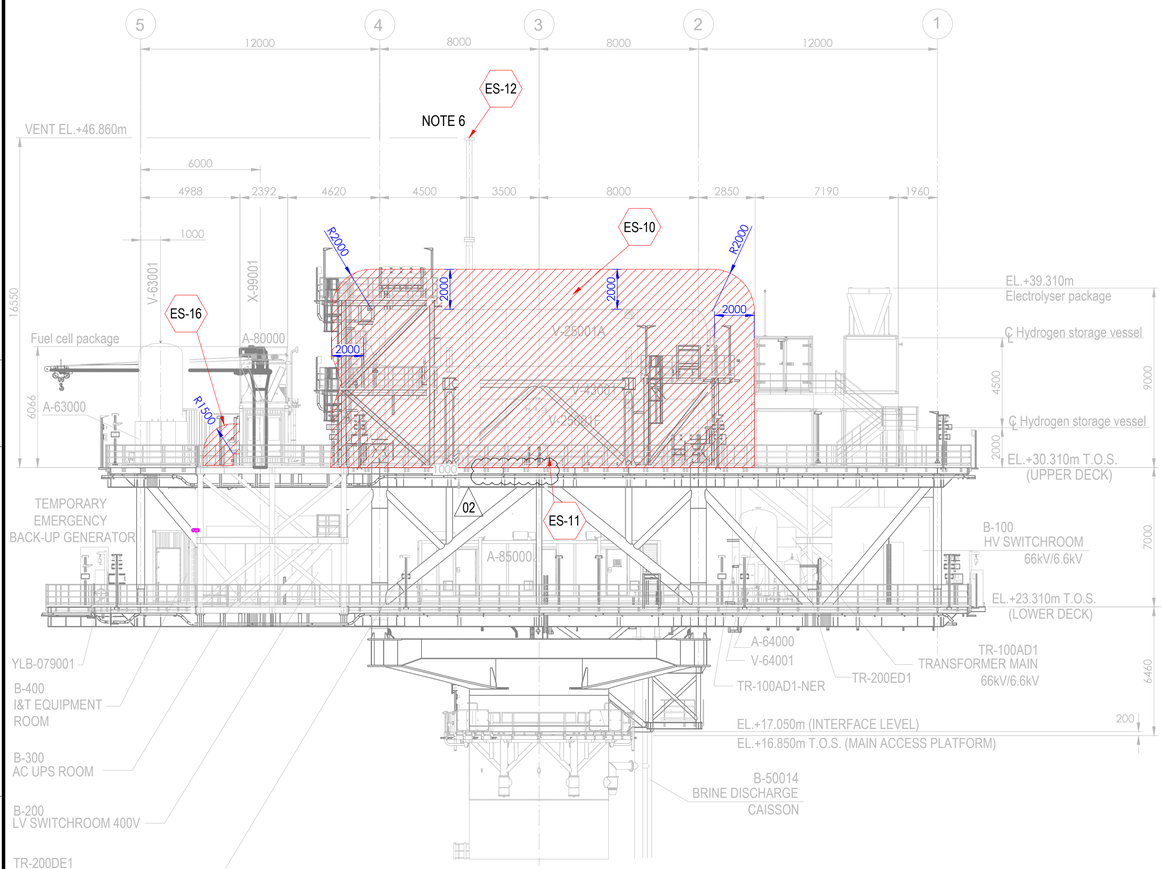
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

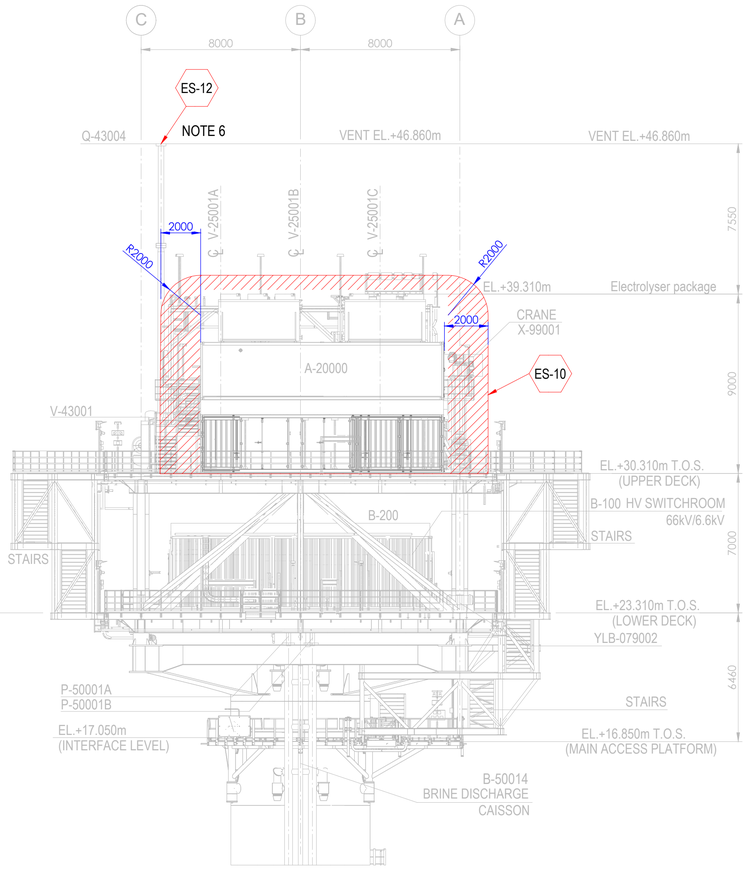
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REV. 02

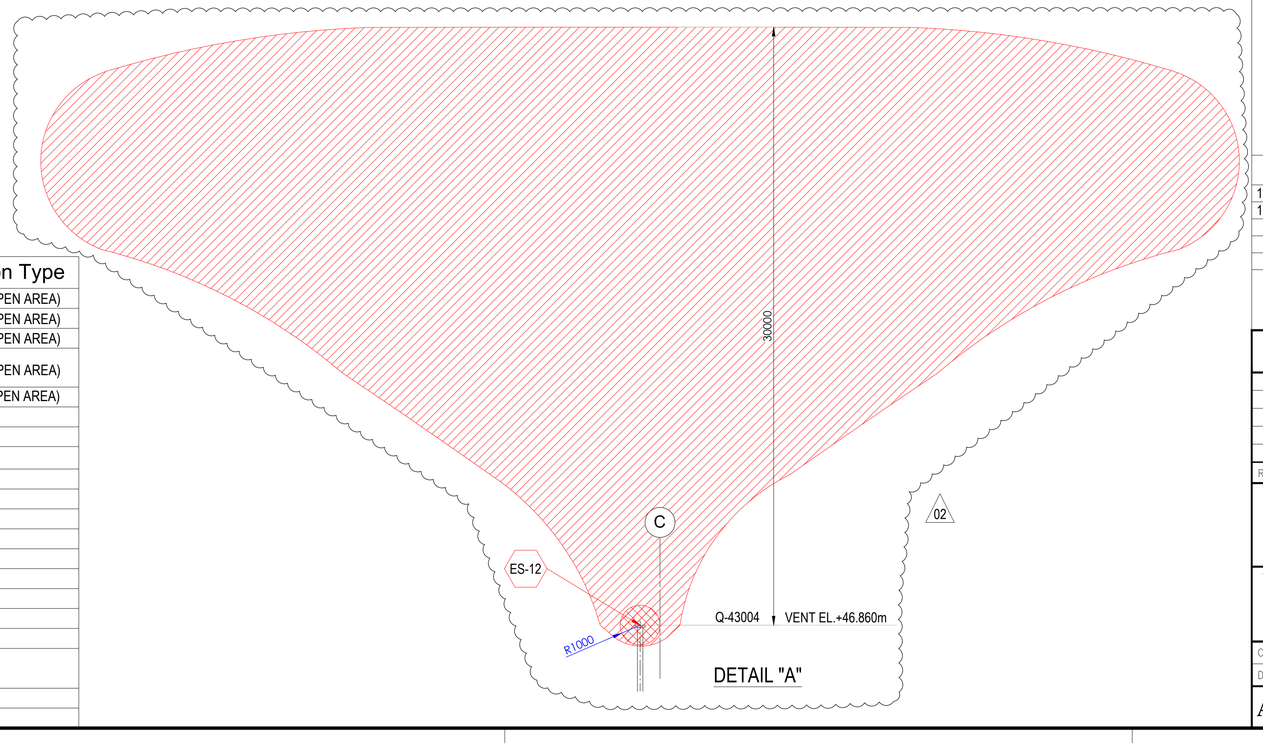


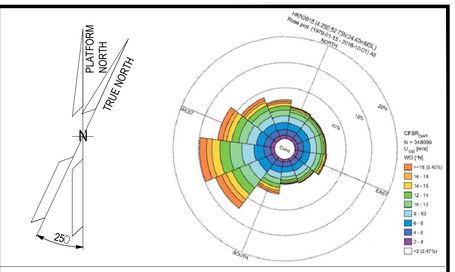
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-08	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001640	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990025			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-ECEx FIDI 21.0015X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-08	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001640		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-08	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001640	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

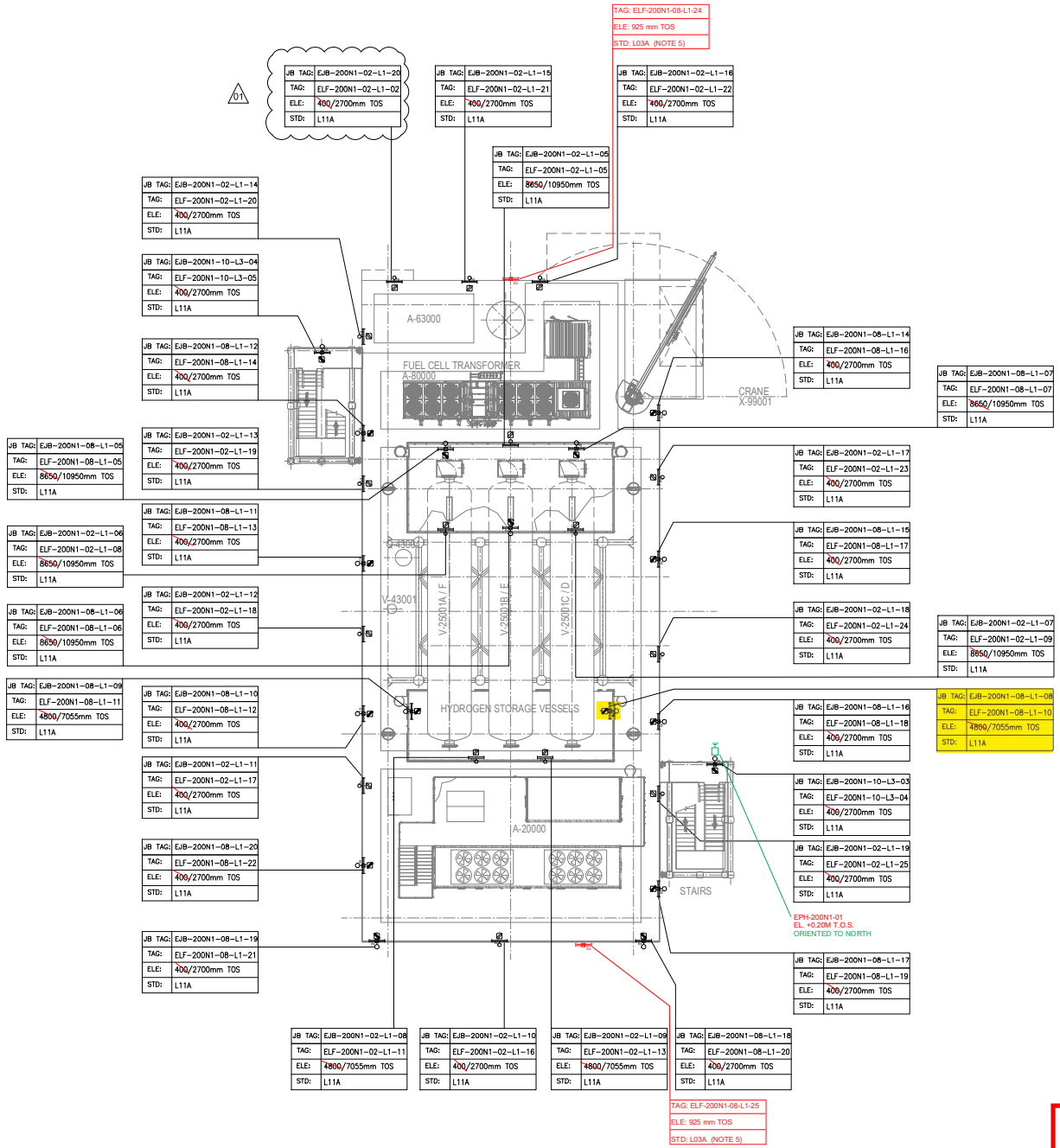
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

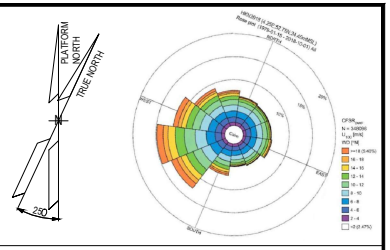
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-20	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:27:03.174Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-20T16:21:03.891Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

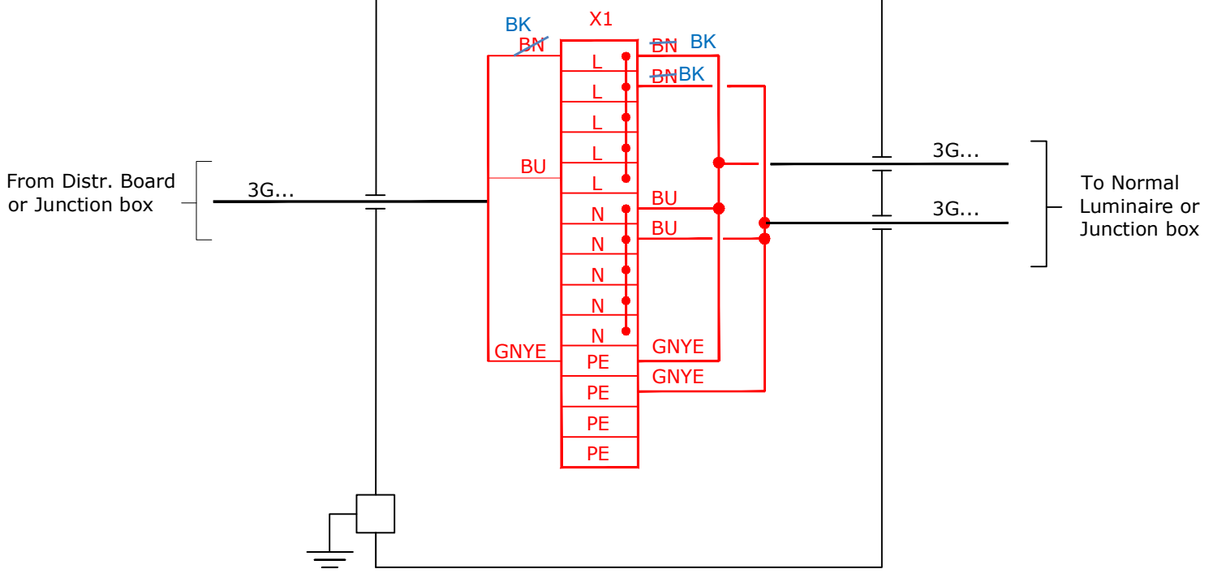
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

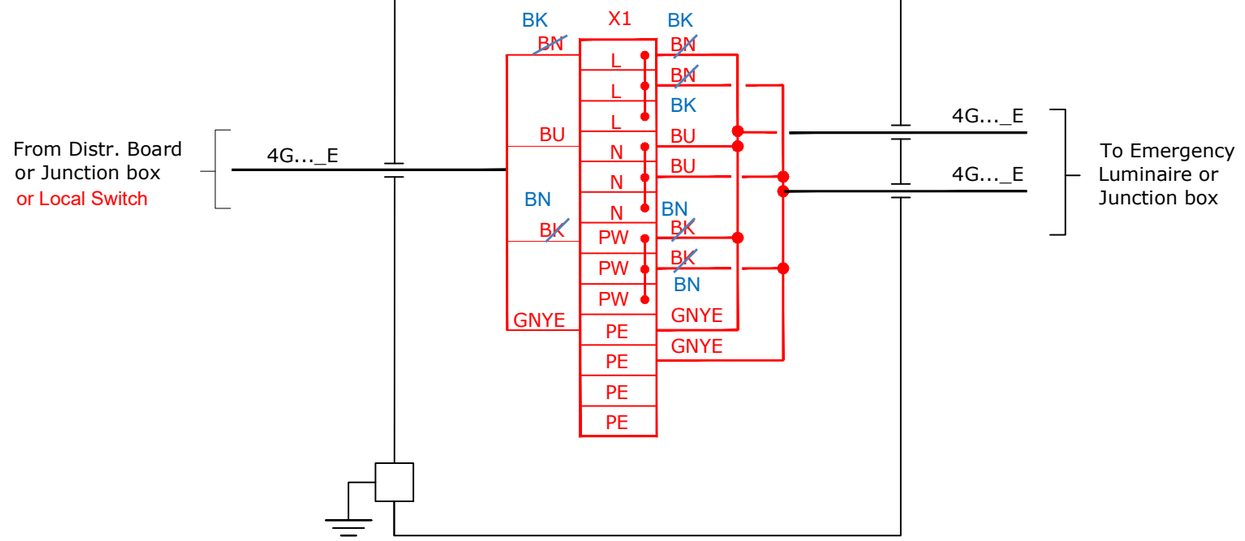
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

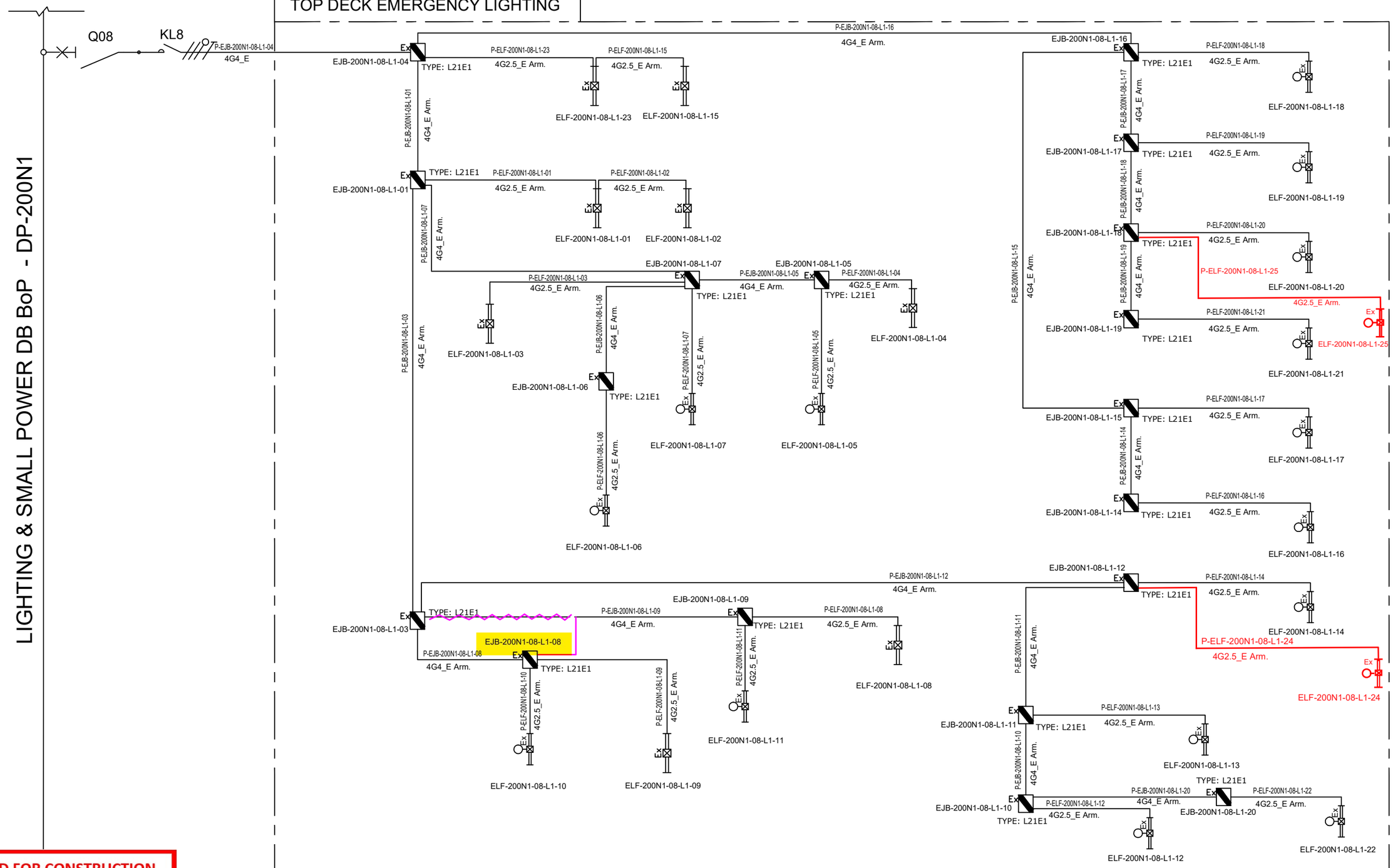
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

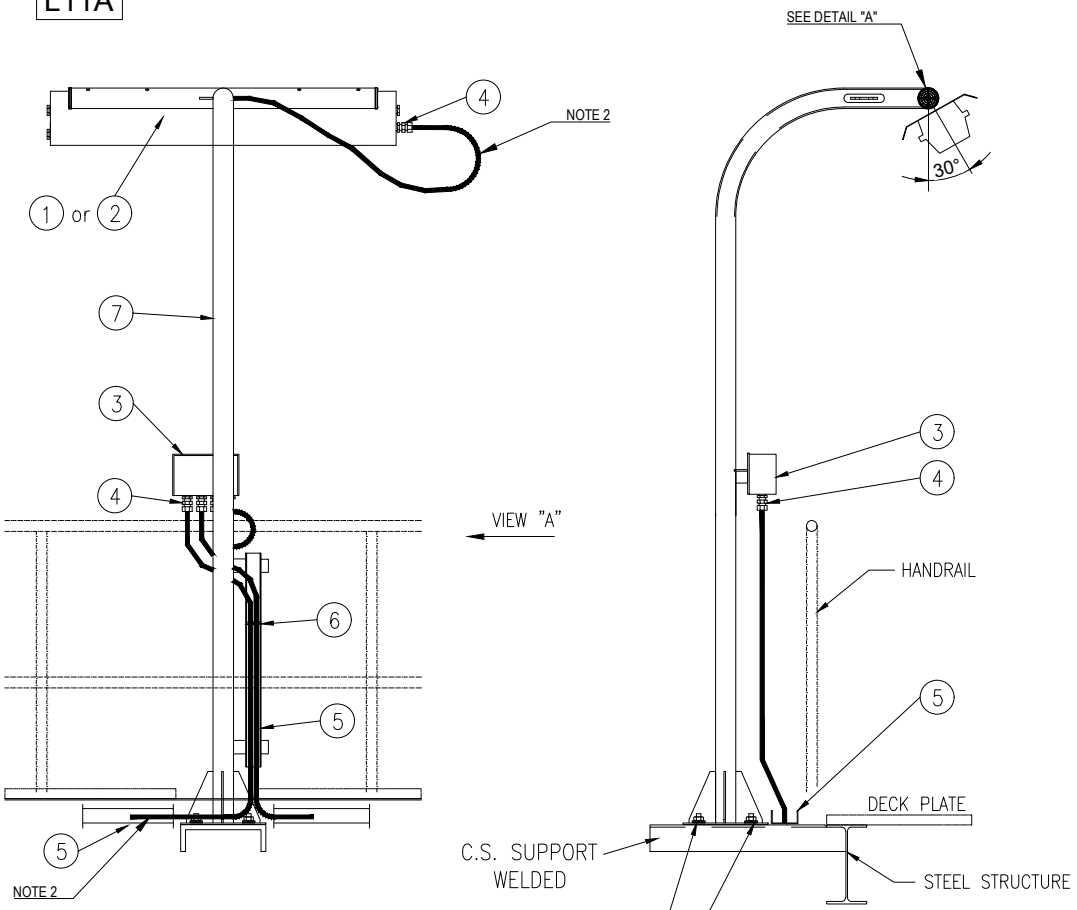
SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

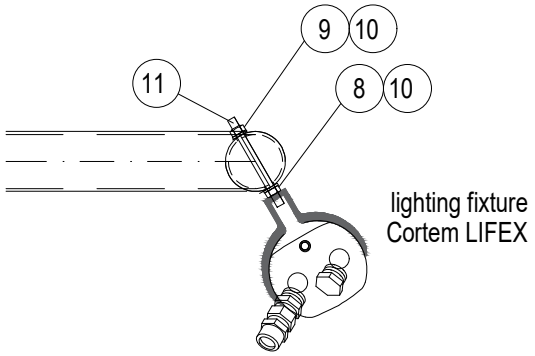
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L11A



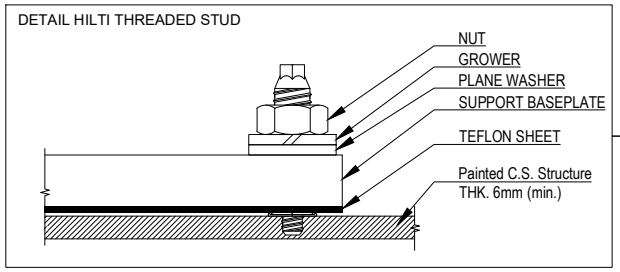
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

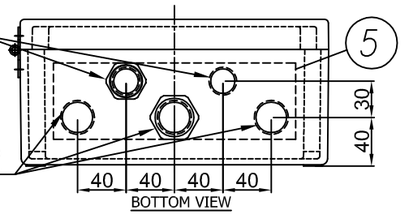
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

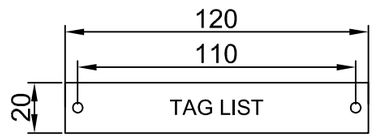
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

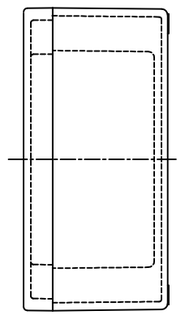
A002MAX

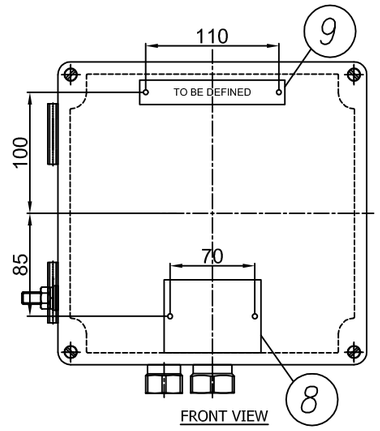
(9) PLATE DETAIL



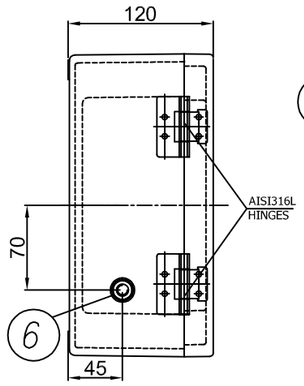
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

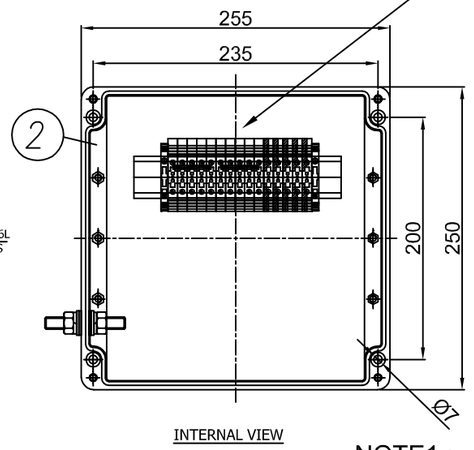

RIGHT VIEW



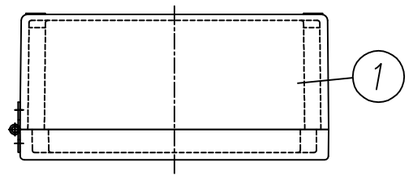
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

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TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

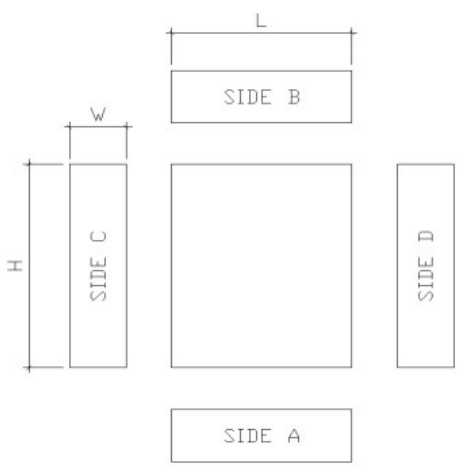
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

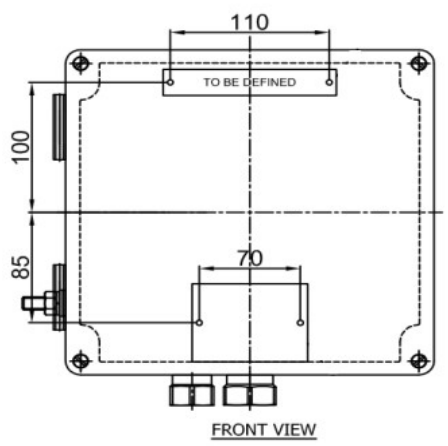
File Name : 1724001481-EL-DA-00003 Rev. 01

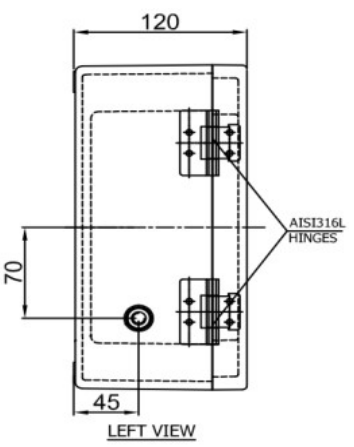
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

Fiditas
explosion safety solutions

17065 · HAA
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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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This certificate may only be reproduced in its entirety, without any change, schedule included

[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Fiditas Ltd. Karlovačka cesta 197, 10250 Zagreb-Lučko, Croatia
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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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This certificate may only be reproduced in its entirety, without any change, schedule included

[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

Fiditas Ltd. Slavka Tomerlina 44, 10361 Zagreb-Sesvete, Croatia
Phone: +385 1 5578565; info@fiditas.com ; www.fiditas.com

[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

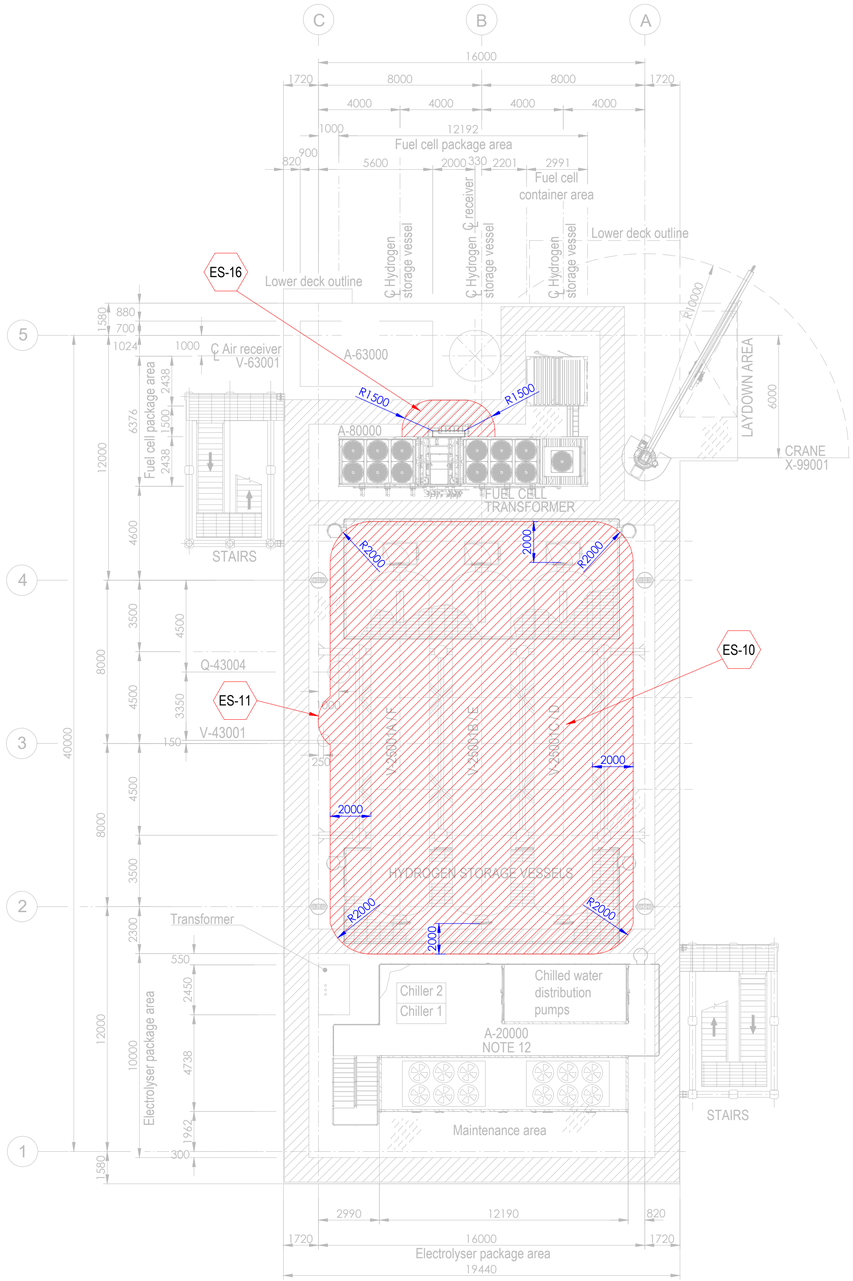
[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

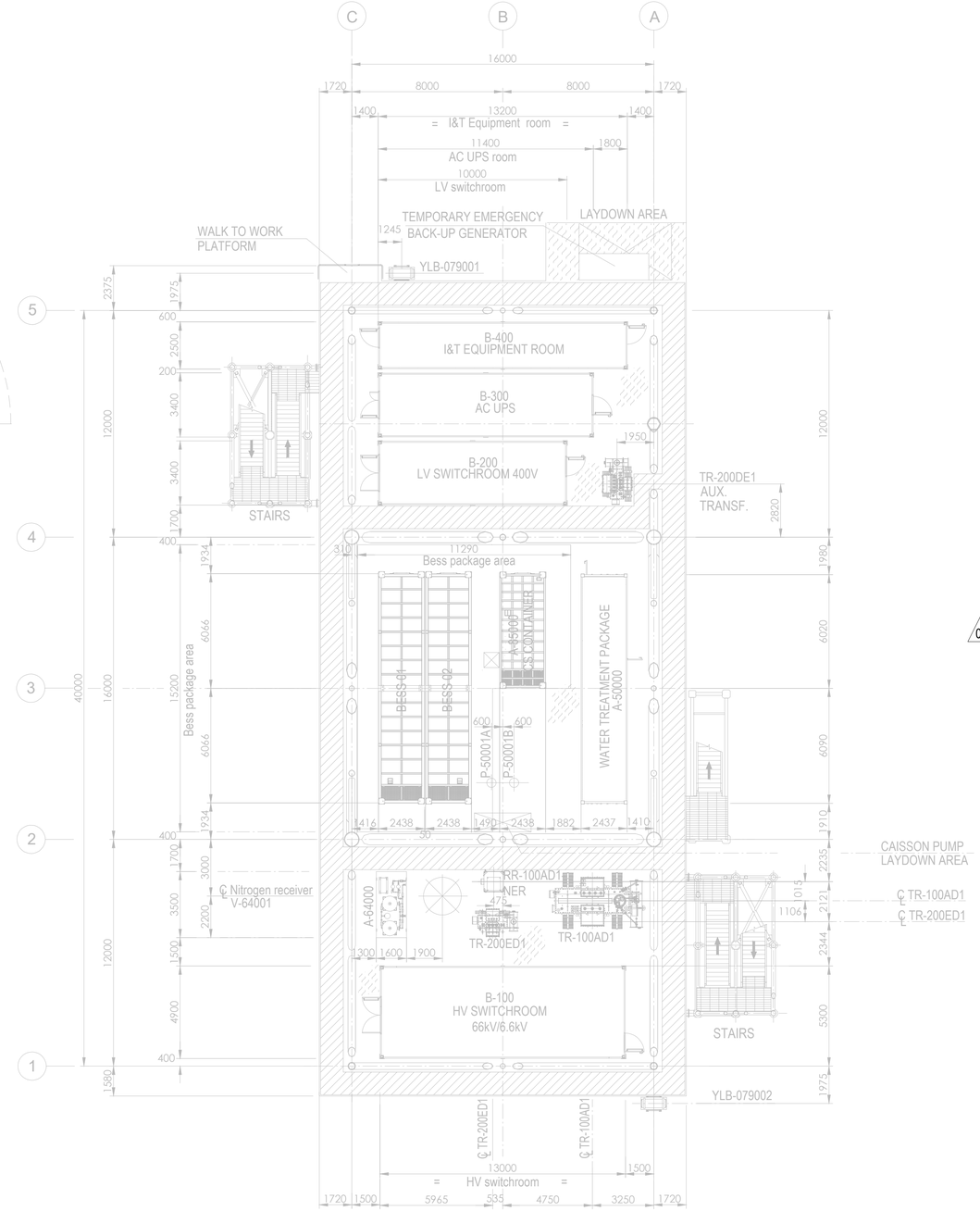
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



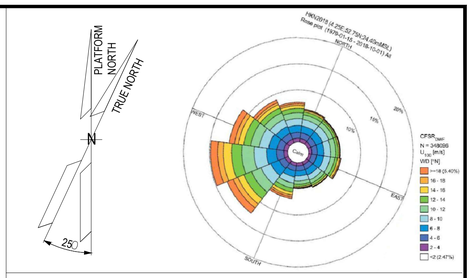
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

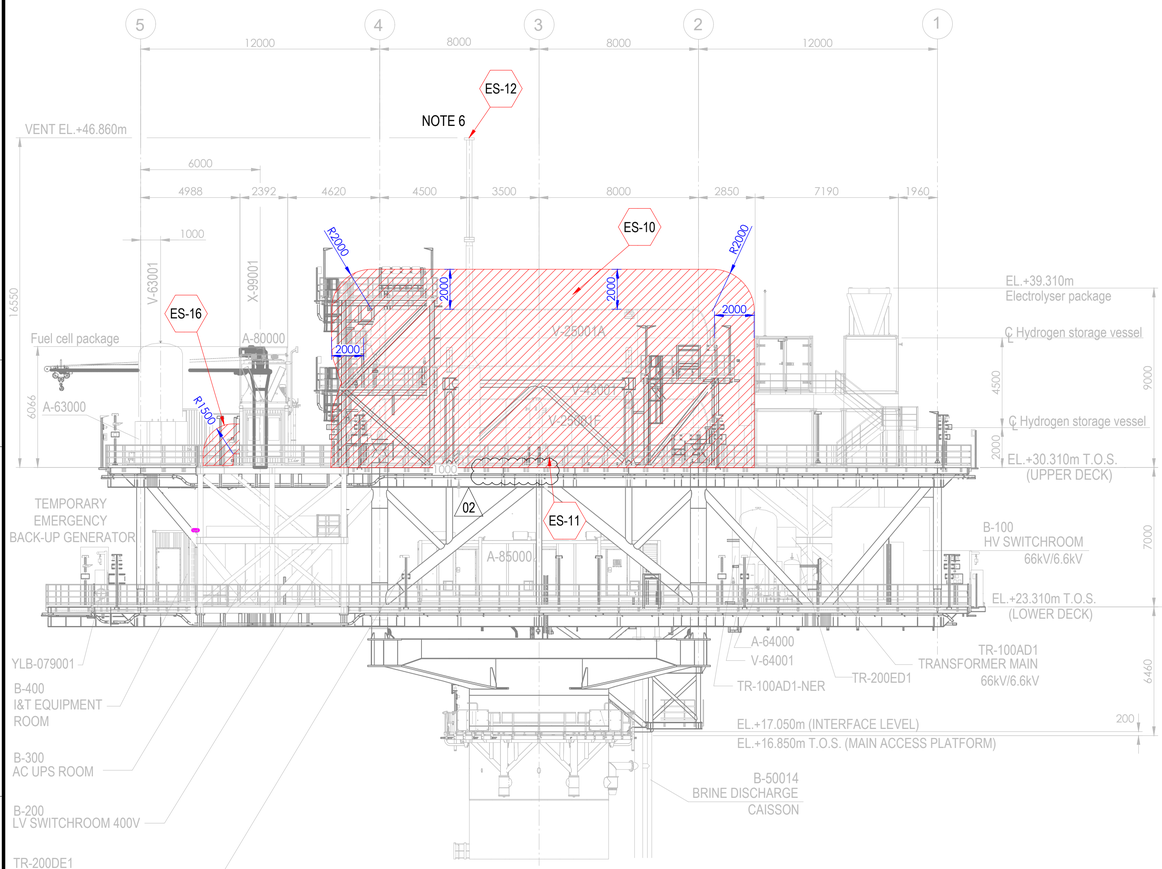
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

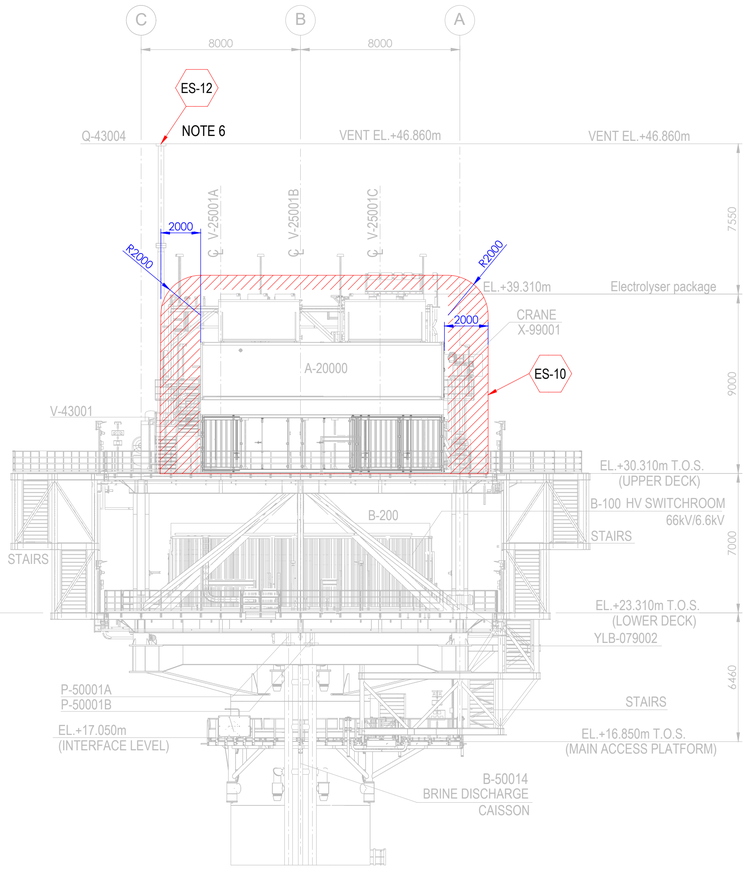
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

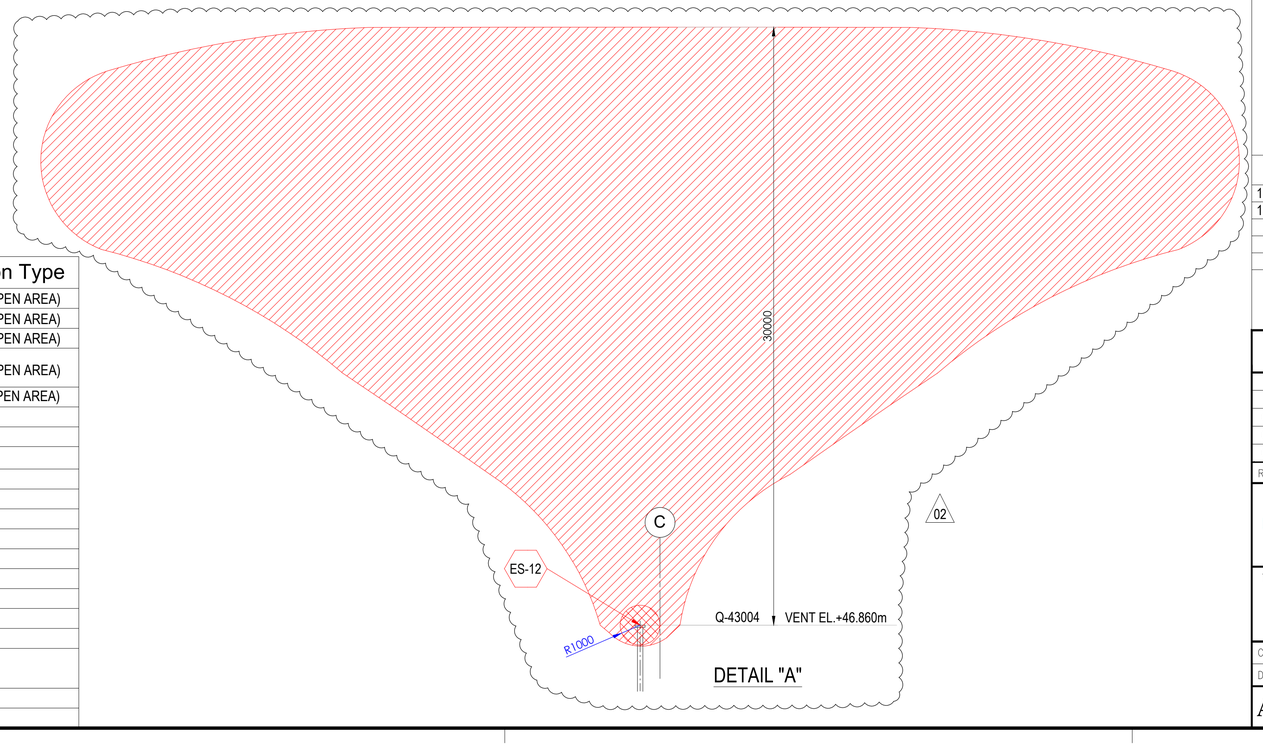


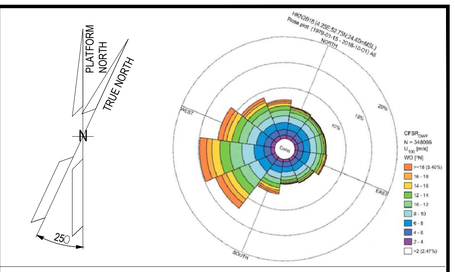
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-07	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001641	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990023			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-ECEx FIDI 21.0015X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-07	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001641		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	EJB-200N1-08-L1-07	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001641		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

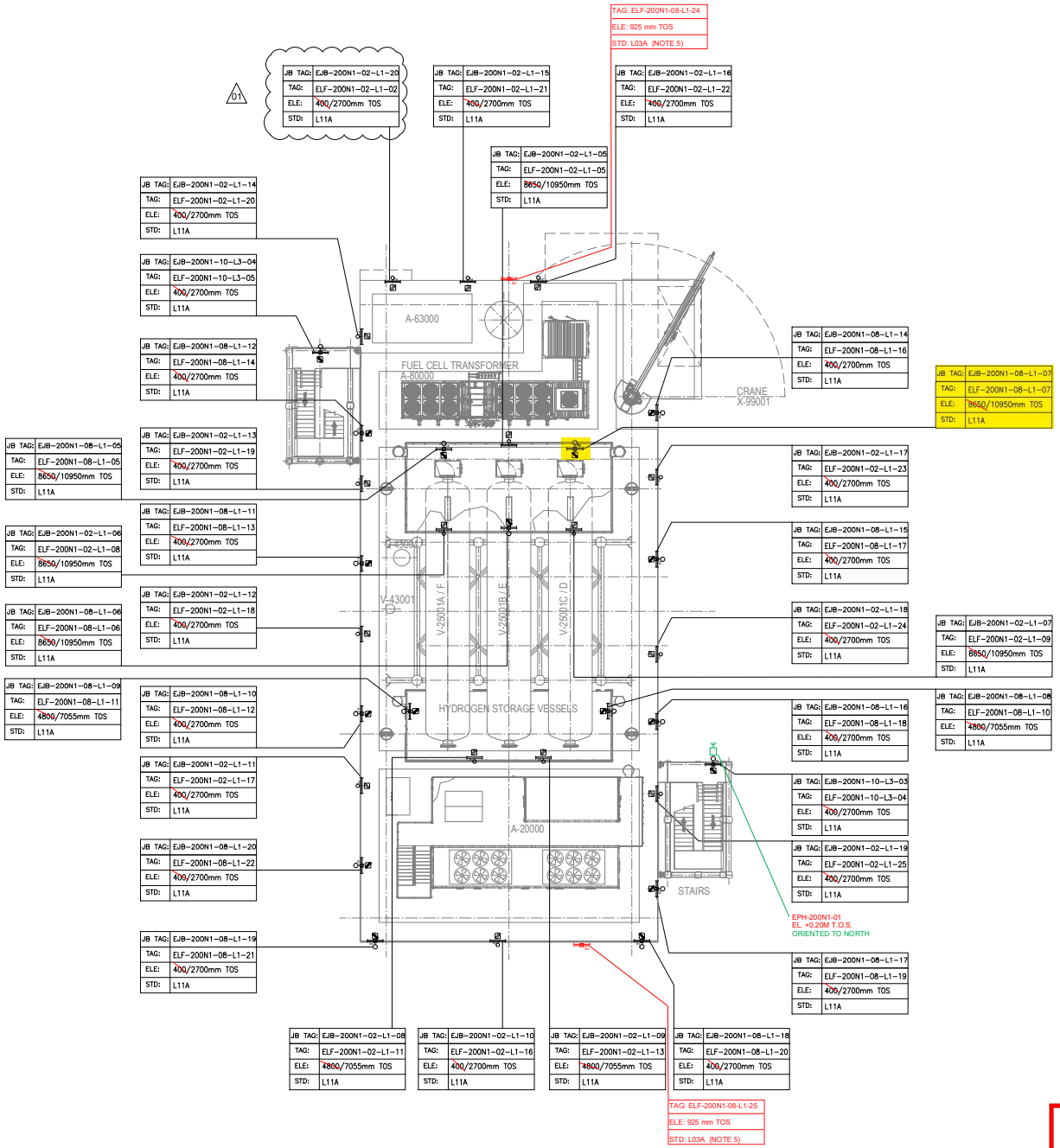
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-20	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:29:39.959Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-20T16:42:52.706Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.

NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

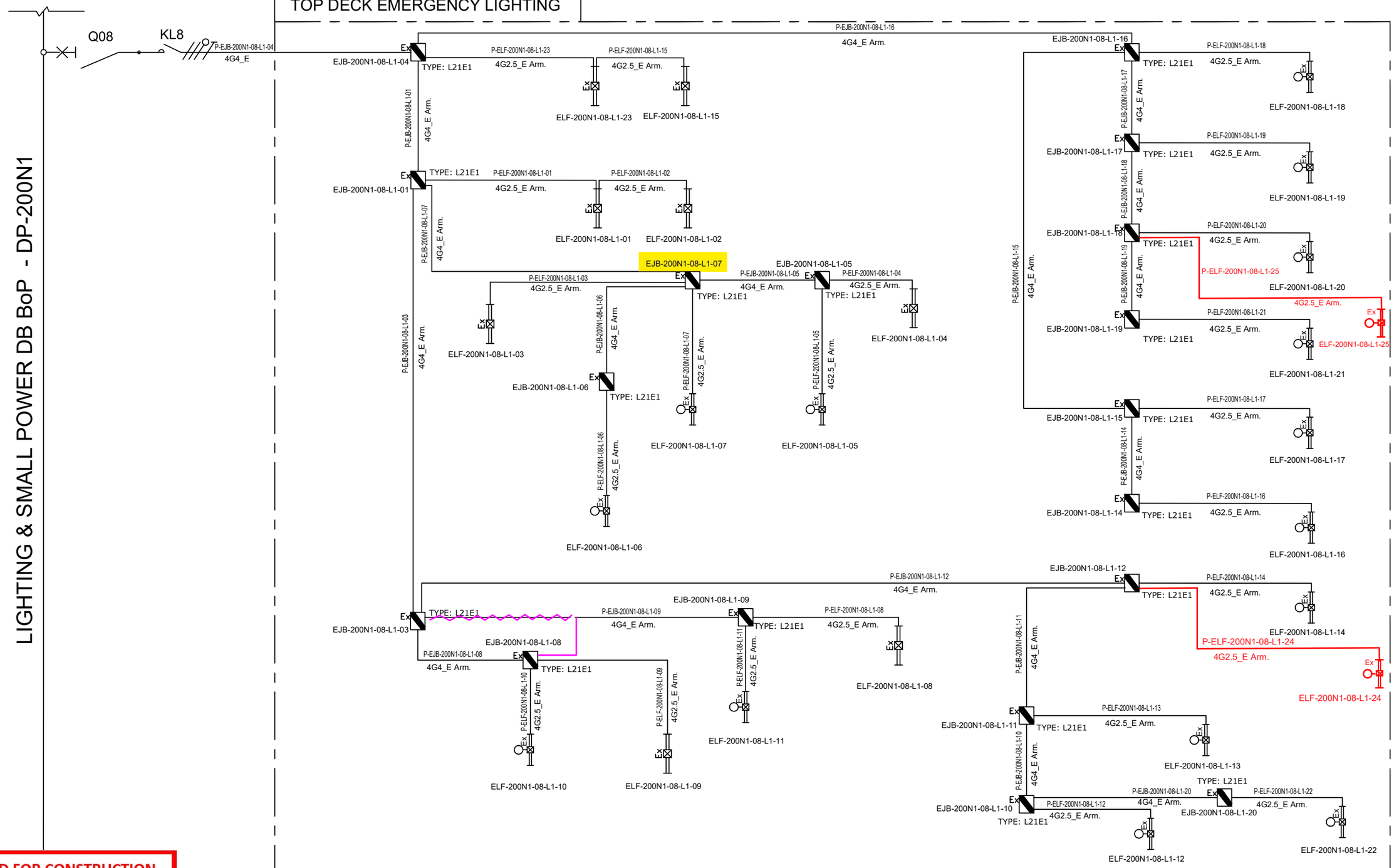
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

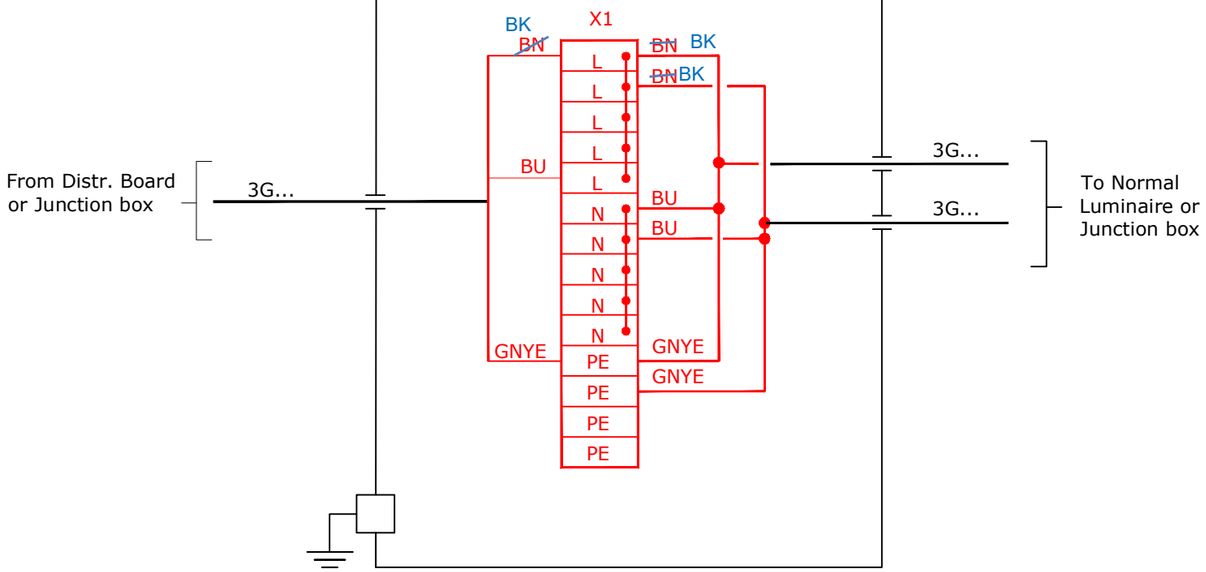
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

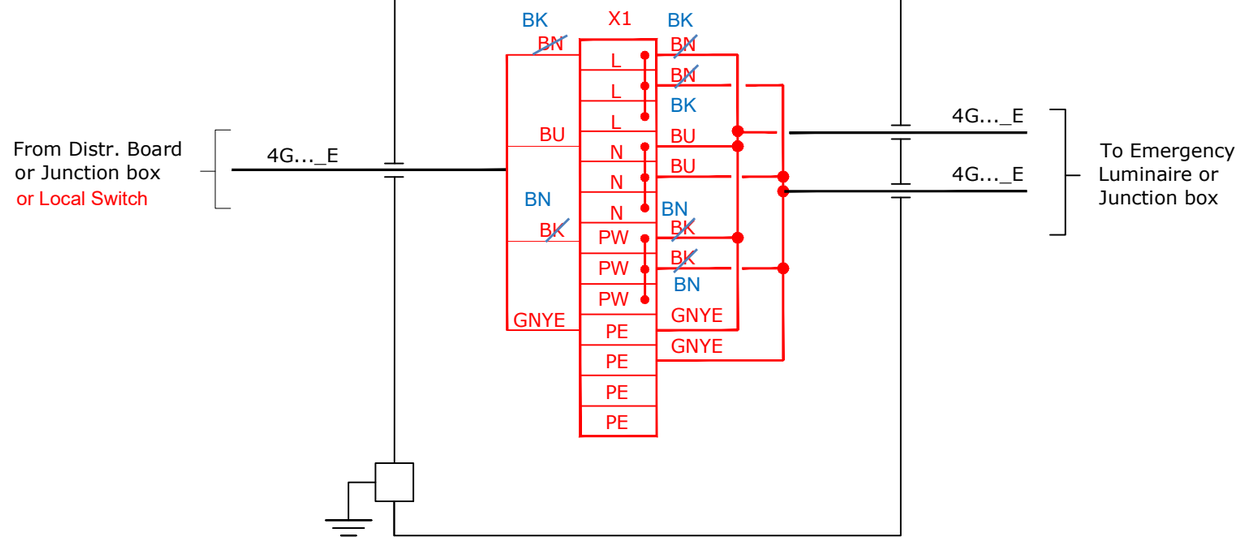
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

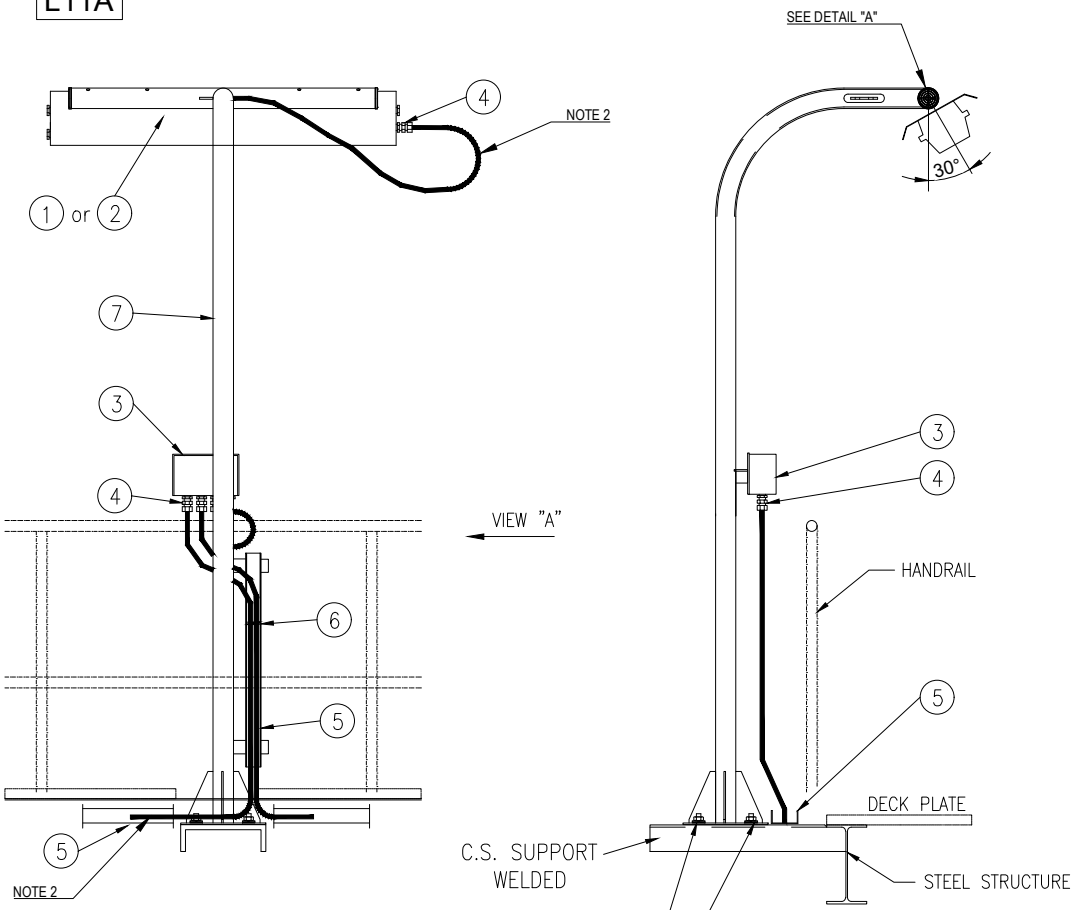
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

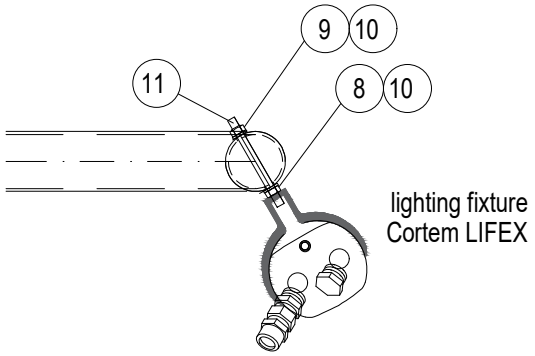
File Name : 123A90-DDL-EL-DG-20125

L11A



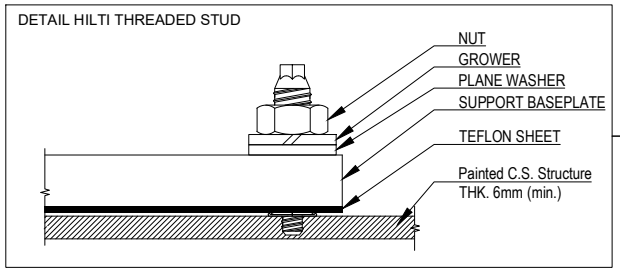
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

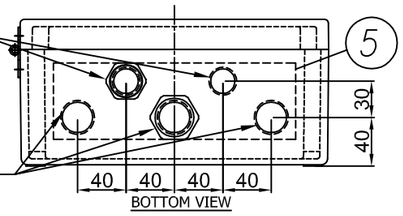
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

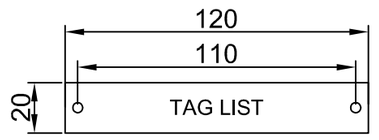
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

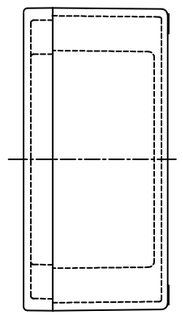
A002MAX

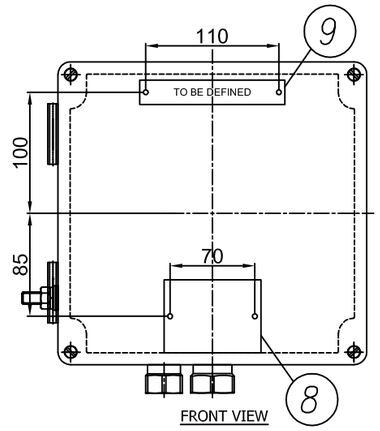
(9) PLATE DETAIL



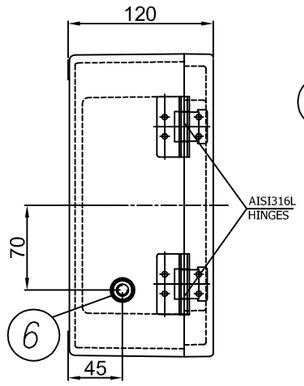
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

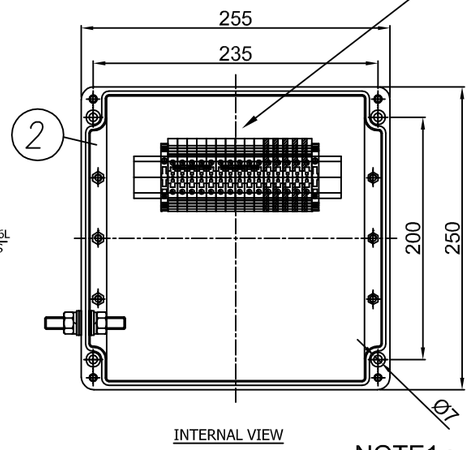

RIGHT VIEW



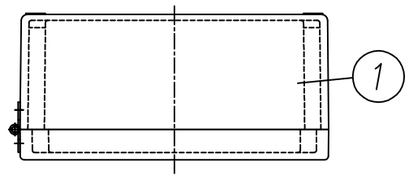
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

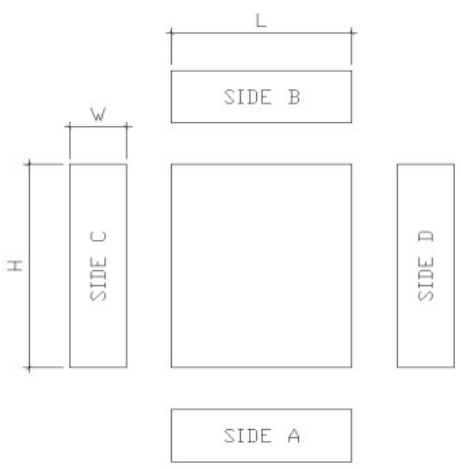
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

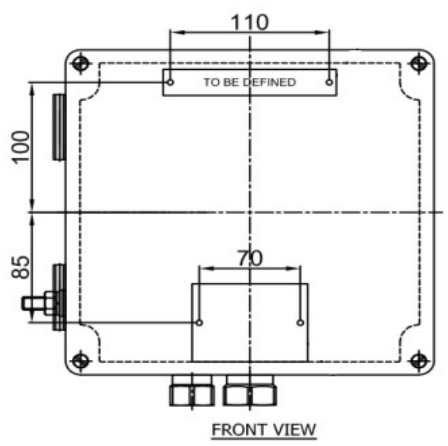
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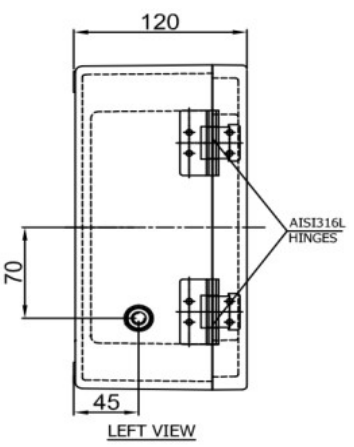
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

Fiditas
explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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3635

[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

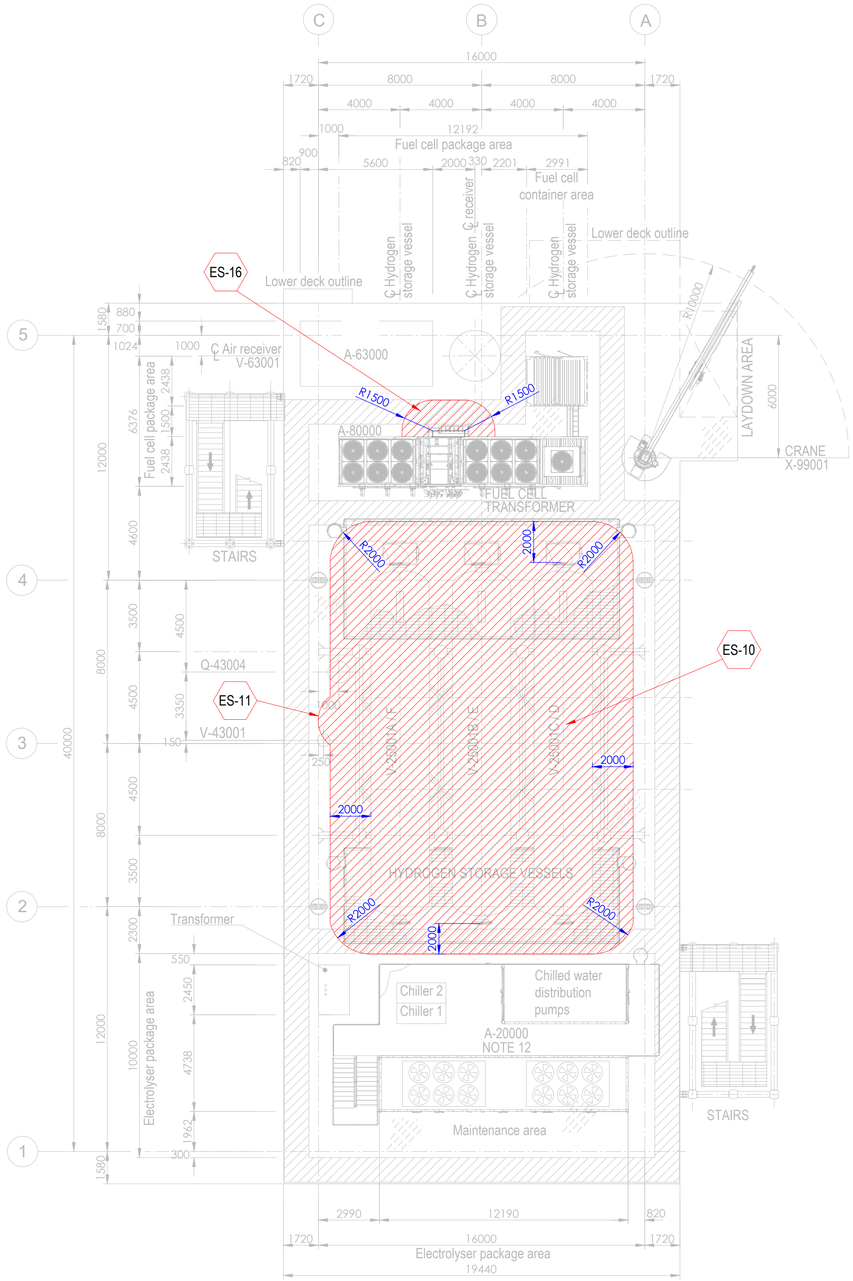
[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

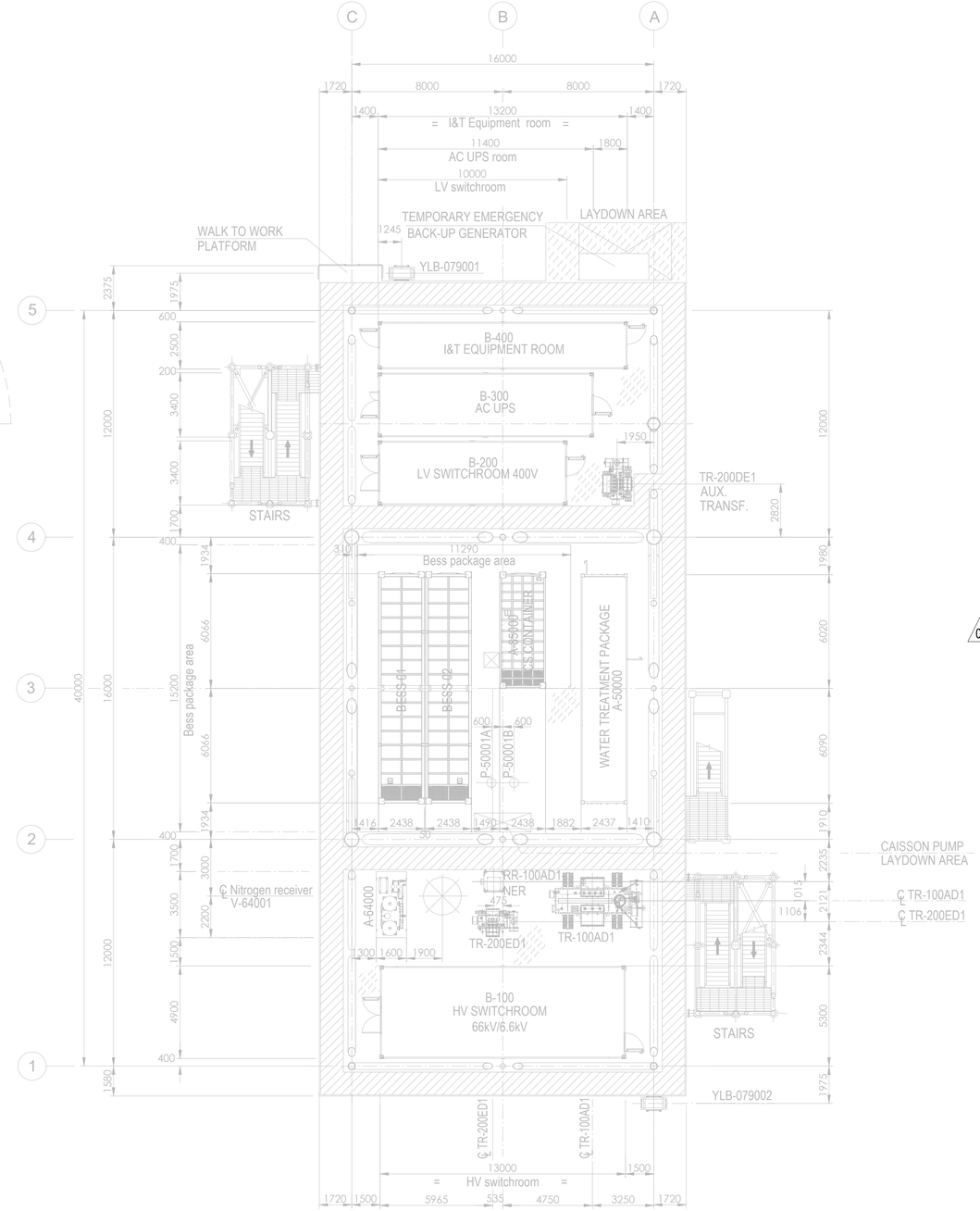
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



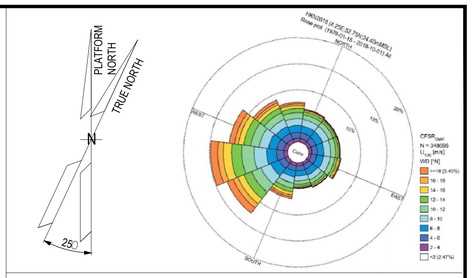
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

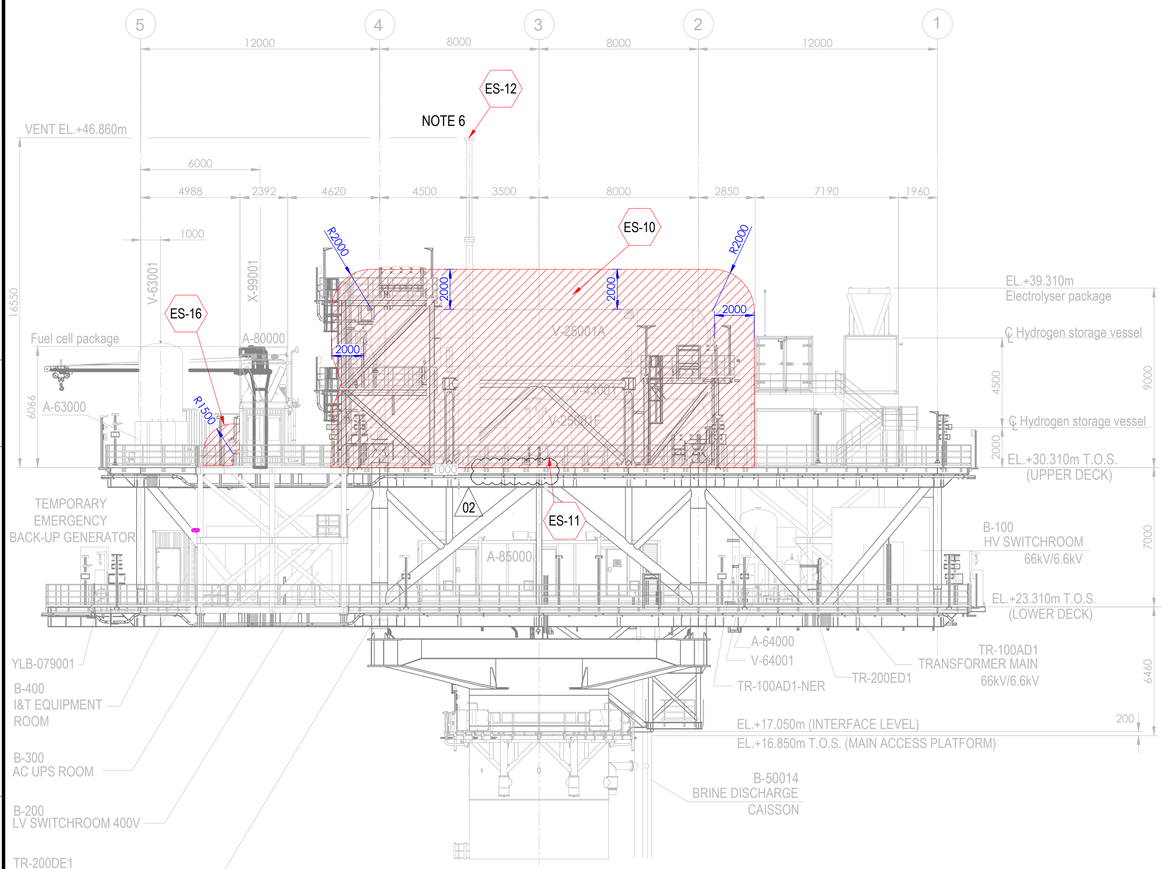
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

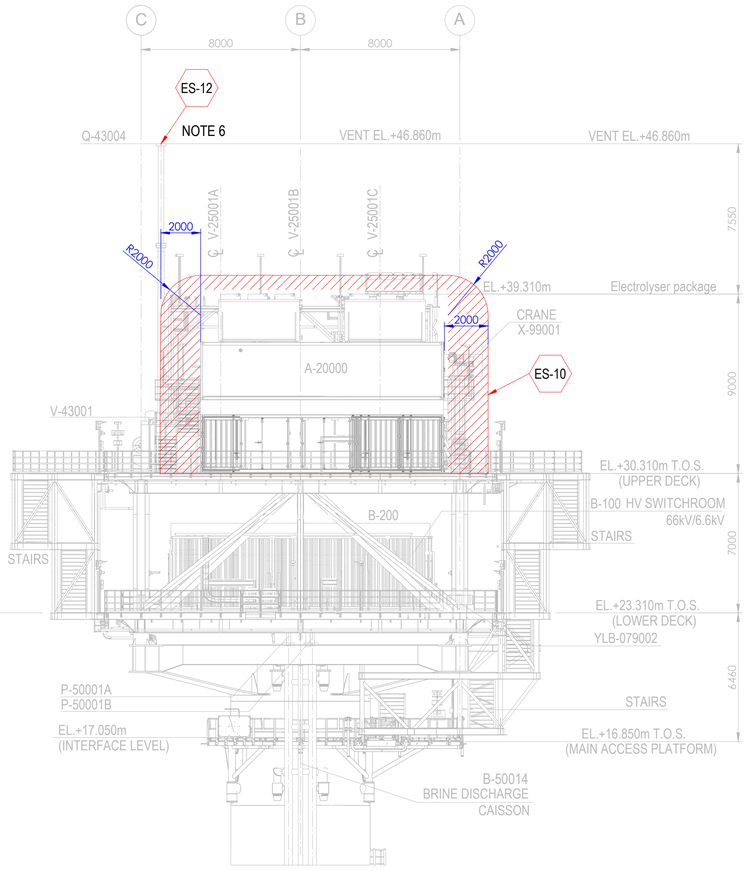
File Name : 123A90-DDL-SAF-DL-30022 Rev.02

DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

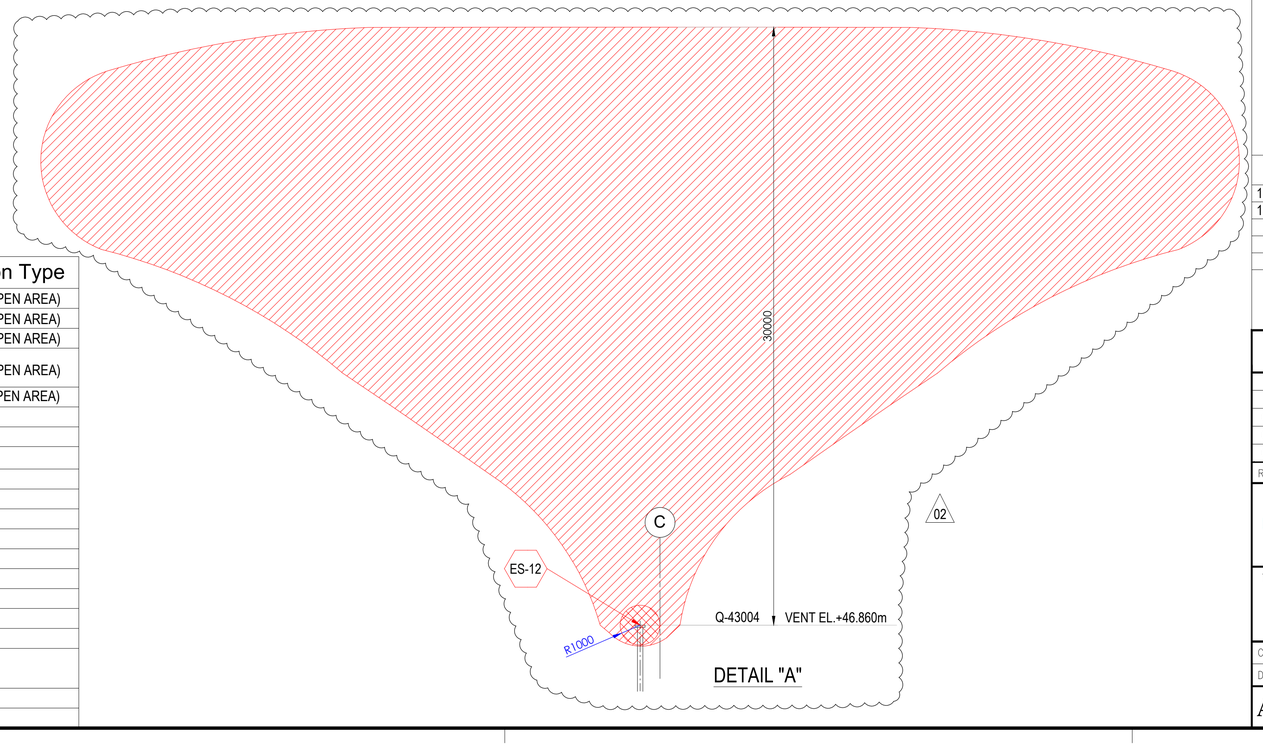


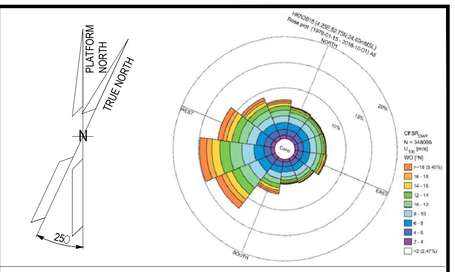
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-09	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001642	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990024			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-ECEx FIDI 21.0015X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	OK	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-09	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001642		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	EJB-200N1-08-L1-09	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001642		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

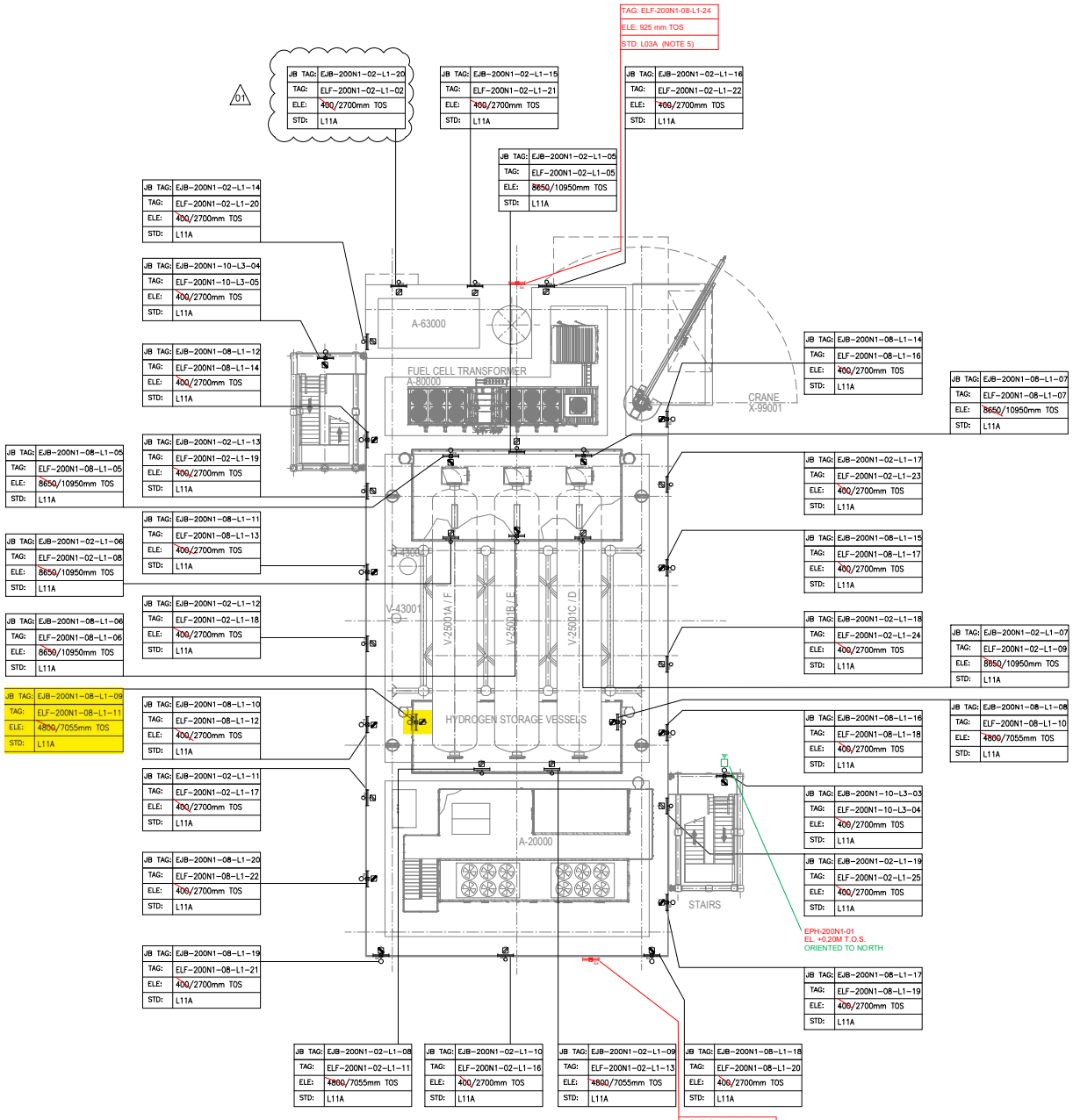
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

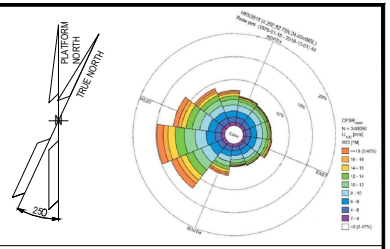
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-18	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:30:38.525Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-18T07:58:51.368Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. → EJB-200N1-08-L1-01

EJB-200N1-08-L1-01 — TYPE: L21E1
- P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
- P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm. → EJB-200N1-08-L1-07

EJB-200N1-08-L1-07 — TYPE: L21E1
- P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
- P-EJB-200N1-08-L1-06 — 4G4_E Arm. → EJB-200N1-08-L1-06
- P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
- P-EJB-200N1-08-L1-05 — 4G4_E Arm. → EJB-200N1-08-L1-05

EJB-200N1-08-L1-05 — TYPE: L21E1
- P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
- P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

EJB-200N1-08-L1-06 — TYPE: L21E1
- P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06

P-EJB-200N1-08-L1-03 — 4G4_E Arm.

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

EJB-200N1-08-L1-16 — TYPE: L21E1
- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm.

EJB-200N1-08-L1-17 — TYPE: L21E1
- P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
- P-EJB-200N1-08-L1-18 — 4G4_E Arm.

EJB-200N1-08-L1-18 — TYPE: L21E1
- P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
- P-EJB-200N1-08-L1-19 — 4G4_E Arm.

EJB-200N1-08-L1-19 — TYPE: L21E1
- P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
- P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25

P-EJB-200N1-08-L1-15 — 4G4_E Arm.

EJB-200N1-08-L1-15 — TYPE: L21E1
- P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
- P-EJB-200N1-08-L1-14 — 4G4_E Arm.

EJB-200N1-08-L1-14 — TYPE: L21E1
- P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

P-EJB-200N1-08-L1-12 — 4G4_E Arm.

EJB-200N1-08-L1-12 — TYPE: L21E1
- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24

EJB-200N1-08-L1-03 — TYPE: L21E1

EJB-200N1-08-L1-09 — TYPE: L21E1
- P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

EJB-200N1-08-L1-11 — TYPE: L21E1
- P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
- P-EJB-200N1-08-L1-10 — 4G4_E Arm.

EJB-200N1-08-L1-10 — TYPE: L21E1
- P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12
- P-EJB-200N1-08-L1-20 — 4G4_E Arm. → EJB-200N1-08-L1-20
- P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22

EJB-200N1-08-L1-08 — TYPE: L21E1
- P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
- P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09
- P-EJB-200N1-08-L1-08 — 4G4_E Arm.

P-EJB-200N1-08-L1-01 — 4G4_E Arm.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

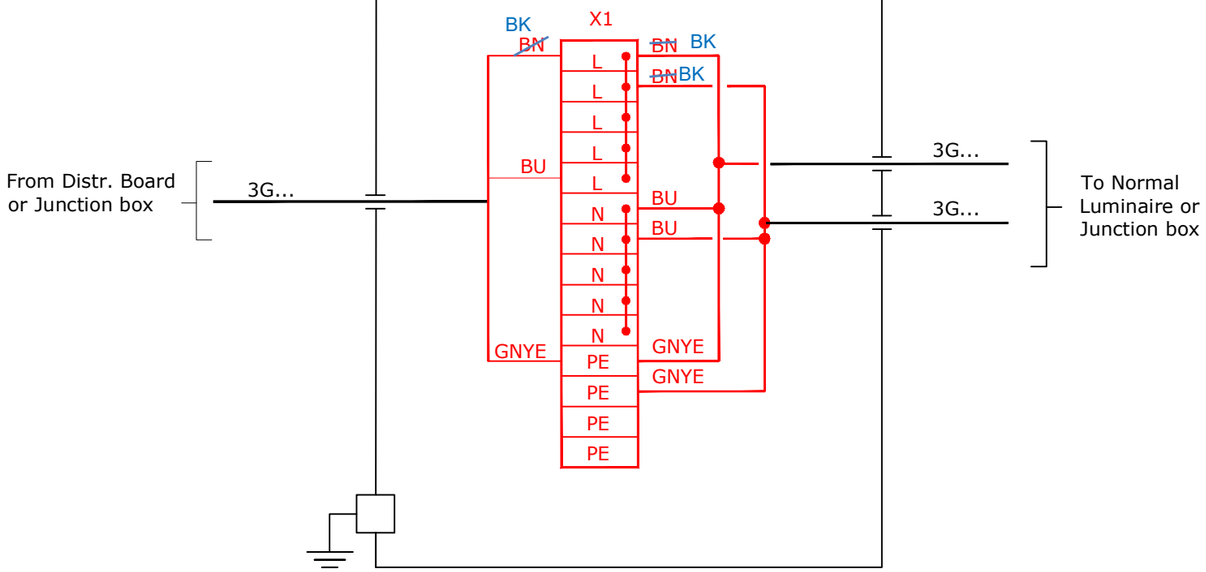
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

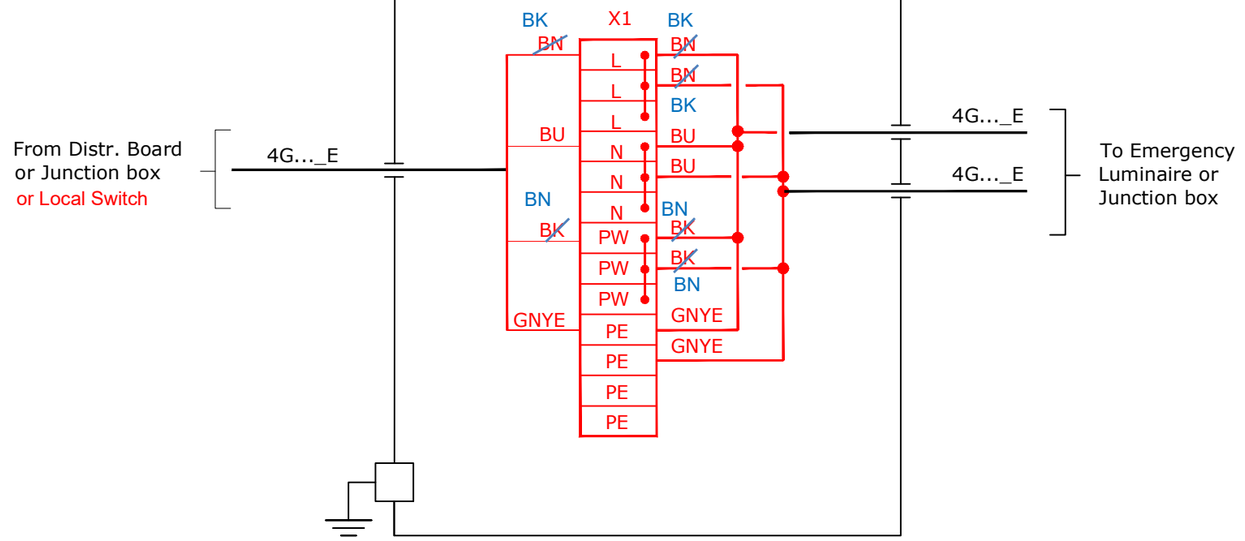
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

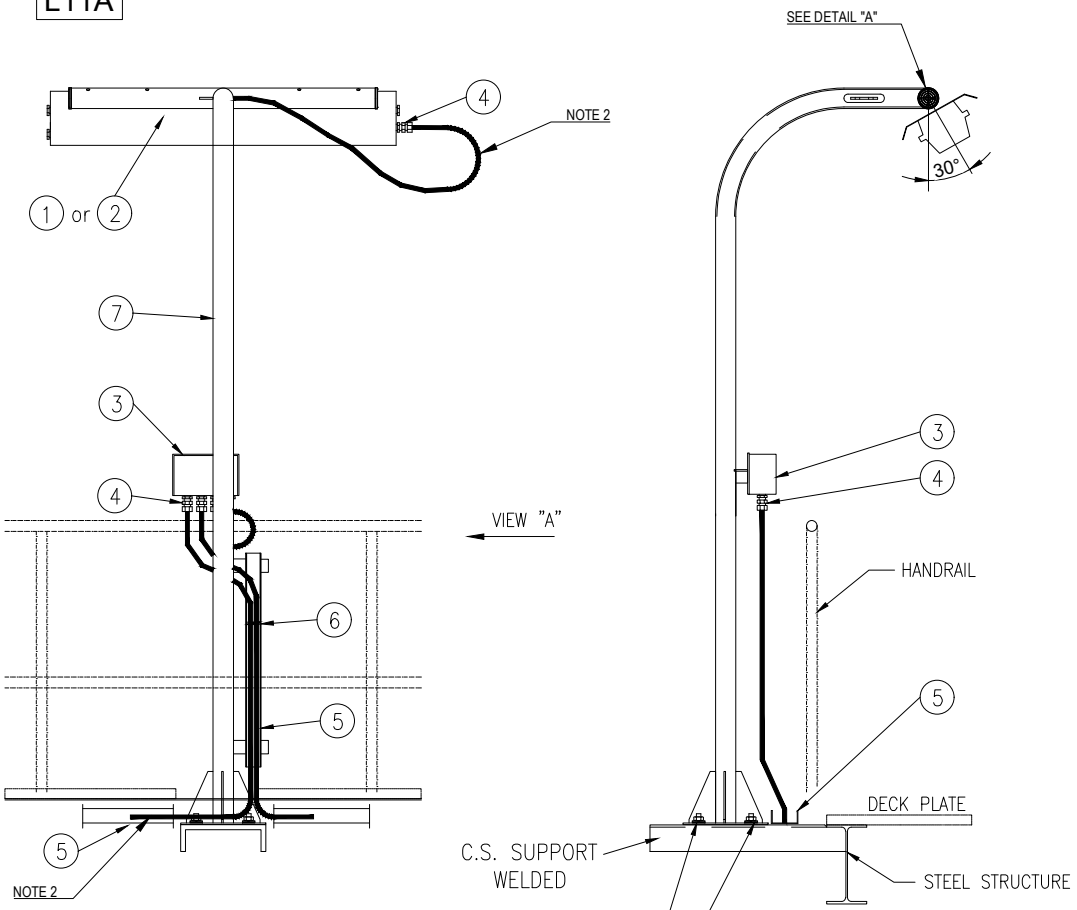
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

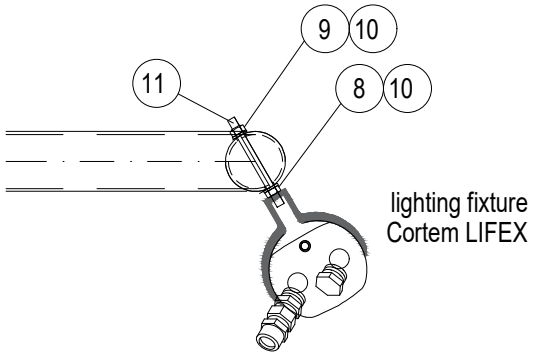
File Name : 123A90-DDL-EL-DG-20125

L11A



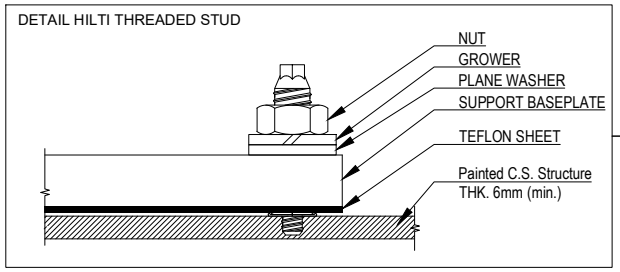
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

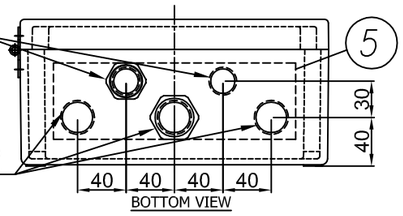
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

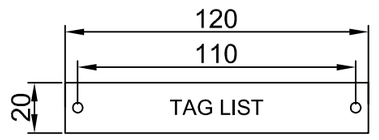
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

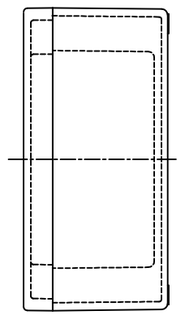
A002MAX

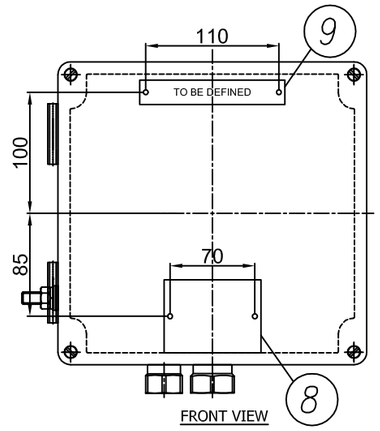
(9) PLATE DETAIL



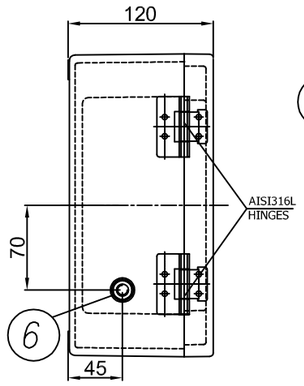
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

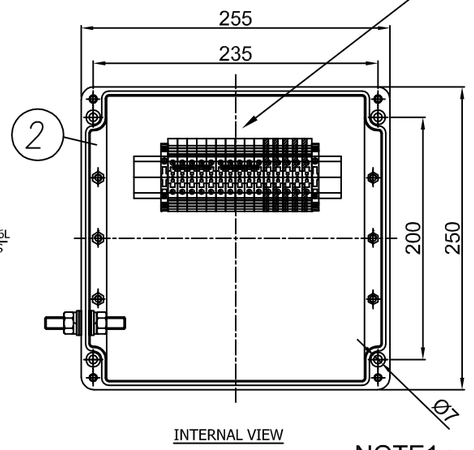

RIGHT VIEW



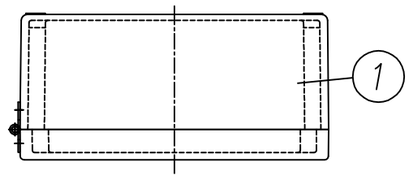
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

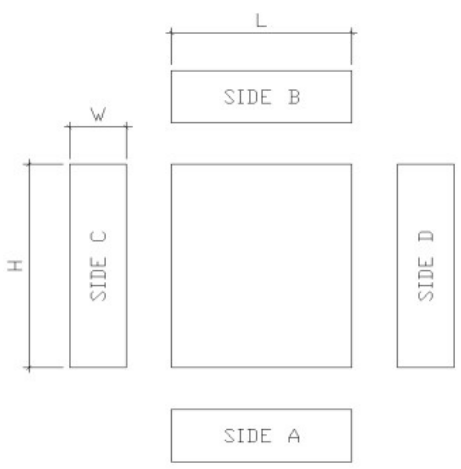
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

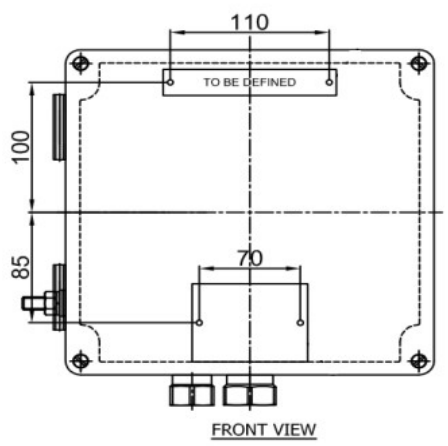
File Name : 1724001481-EL-DA-00003 Rev. 01

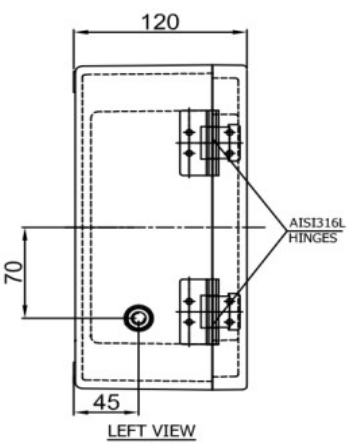
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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explosion safety solutions

17065 · HAA
3635

[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

Fiditas Ltd. Slavka Tomerlina 44, 10361 Zagreb-Sesvete, Croatia
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This certificate may only be reproduced in its entirety, without any change, schedule included

[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

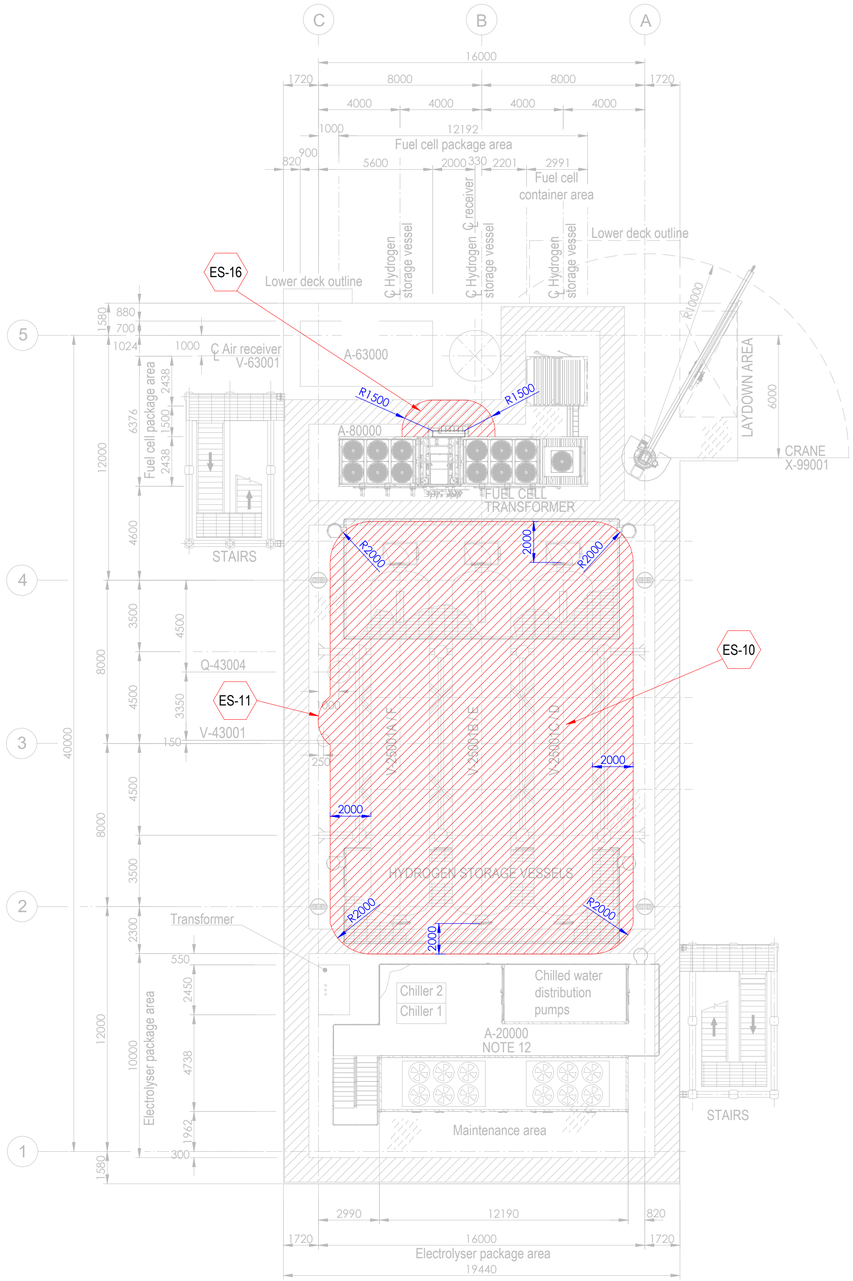
[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

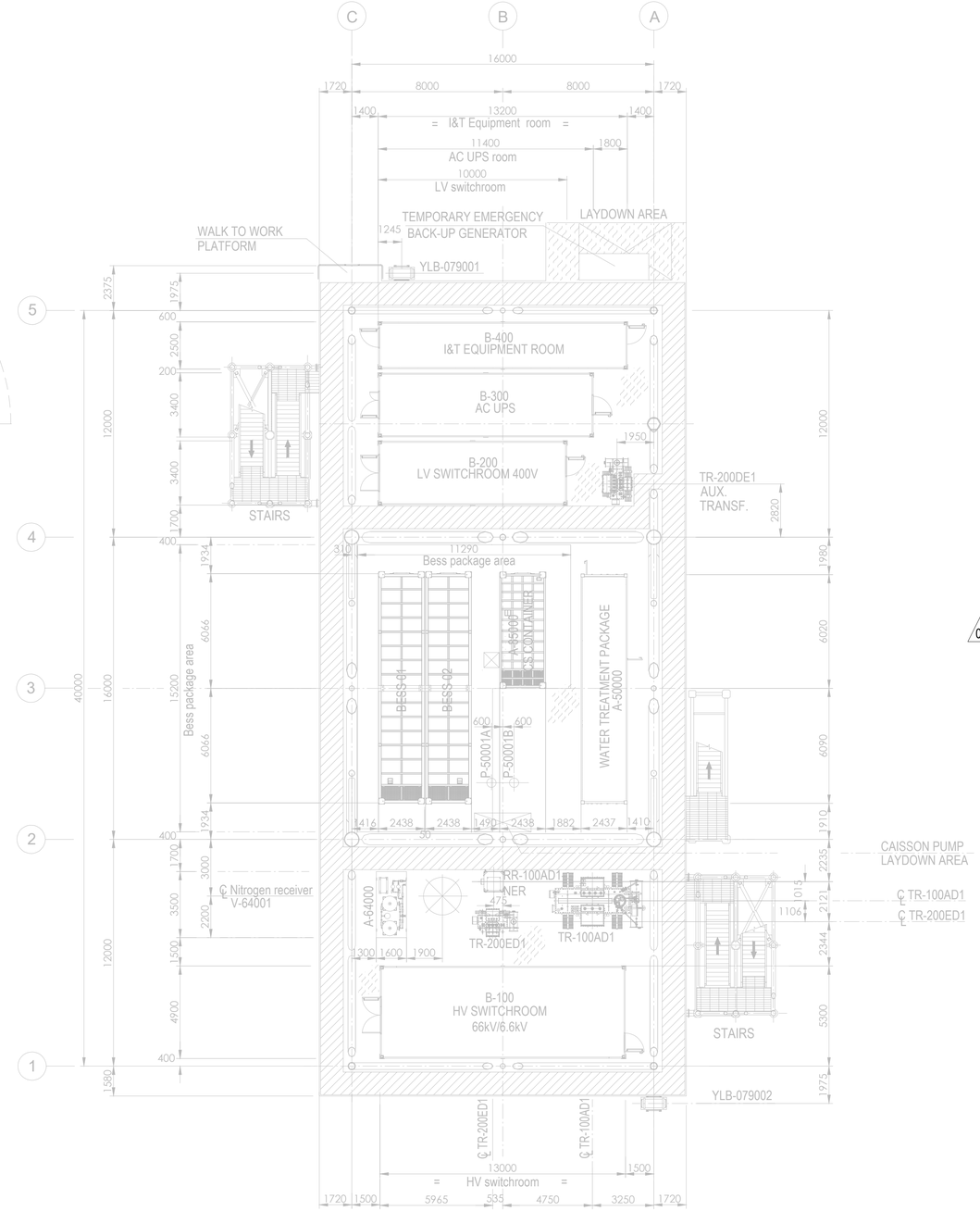
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



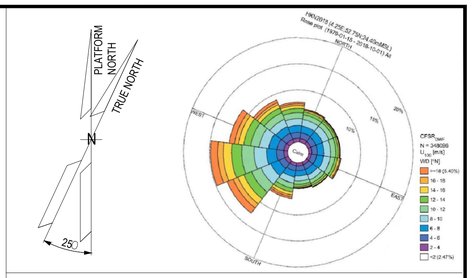
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

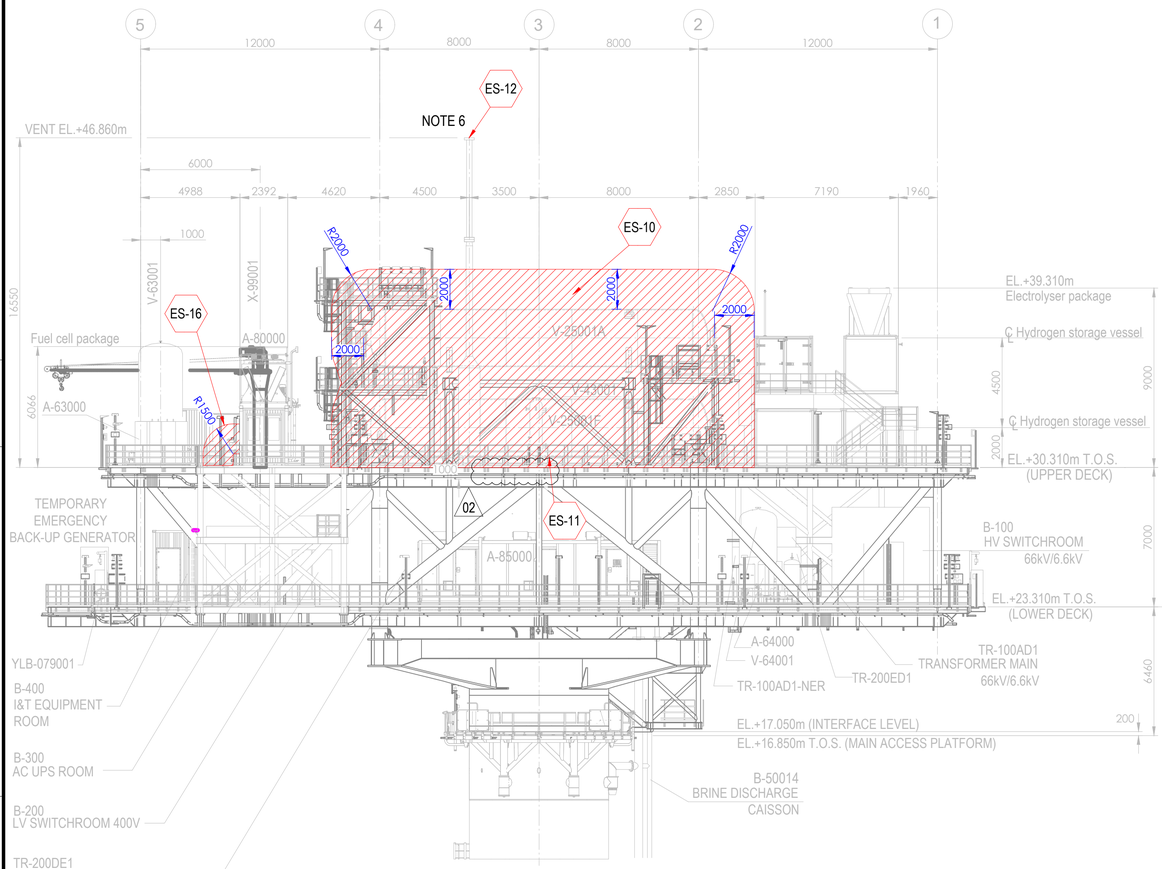
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

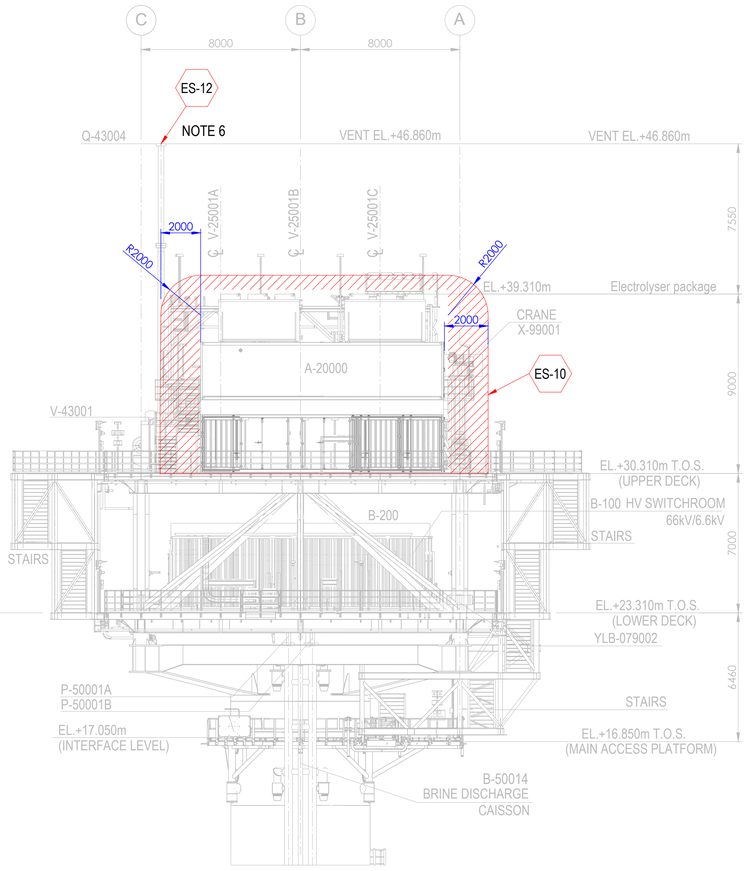
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REV. 02

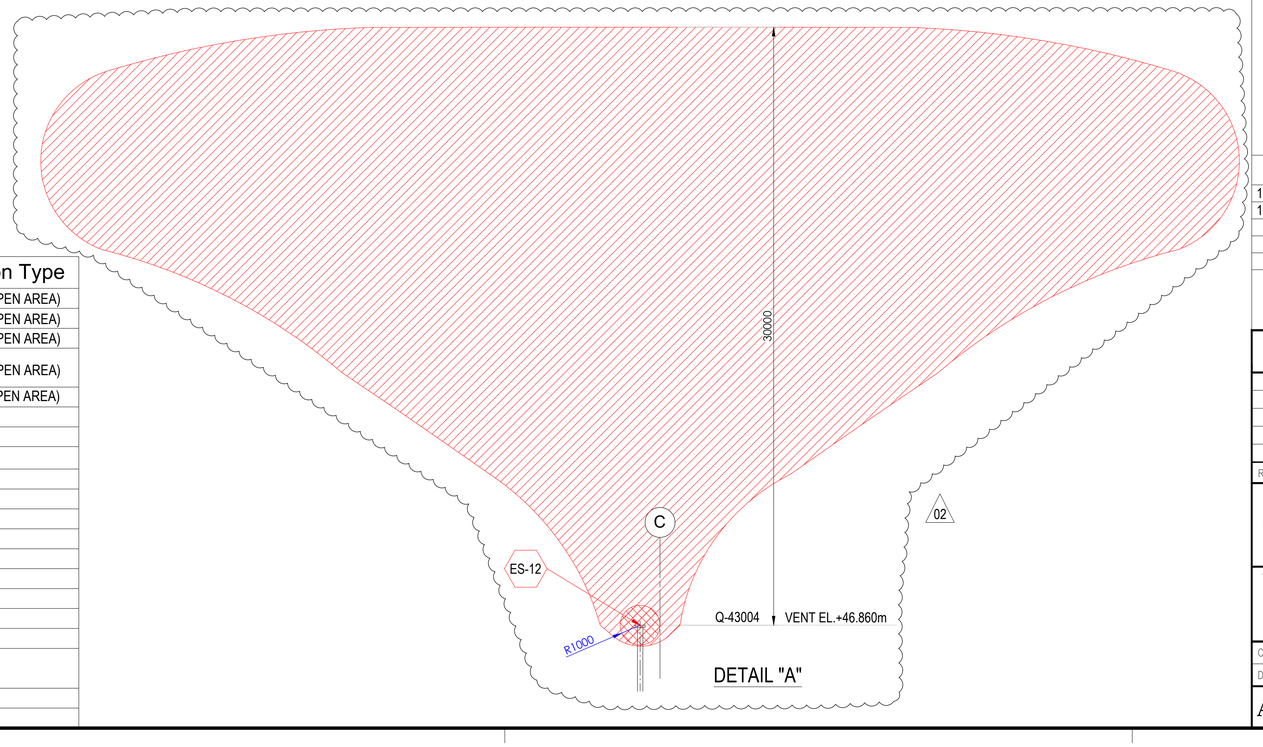


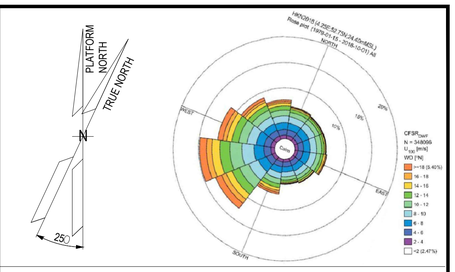
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-10	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001643	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990026			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state "NA". Comments are required for 'Failure' column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex "e" – Ex "n" – Ex "t")	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-10	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001643		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-10	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001643	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

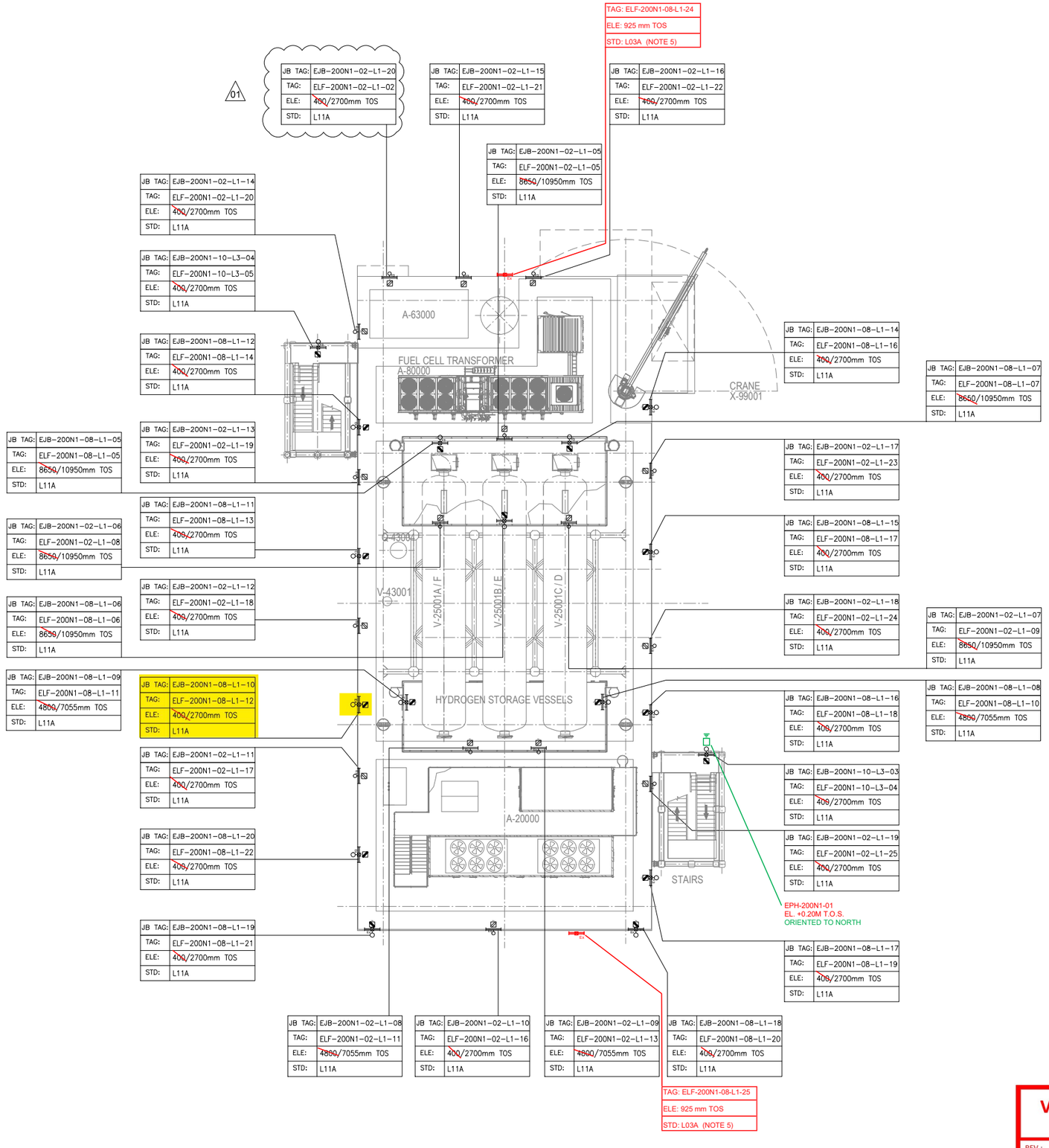
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Gabriele Bertuccelli	
Date	2025-01-10	2025-01-23	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:30:52.782Z	PROVERLIS Digitaly signed by Gabriele Bertuccelli 2025-01-23T17:19:40.948Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



JB TAG:	EJB-200N1-02-L1-20
TAG:	ELF-200N1-02-L1-02
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-15
TAG:	ELF-200N1-02-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-16
TAG:	ELF-200N1-02-L1-22
ELE:	400/2700mm TOS
STD:	L11A

TAG: ELF-200N1-08-L1-24
ELE: 925 mm TOS
STD: L03A (NOTE 5)

JB TAG:	EJB-200N1-02-L1-05
TAG:	ELF-200N1-02-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-14
TAG:	ELF-200N1-02-L1-20
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-04
TAG:	ELF-200N1-10-L3-05
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-12
TAG:	ELF-200N1-08-L1-14
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-14
TAG:	ELF-200N1-08-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-07
TAG:	ELF-200N1-08-L1-07
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-05
TAG:	ELF-200N1-08-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-13
TAG:	ELF-200N1-02-L1-19
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-17
TAG:	ELF-200N1-02-L1-23
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-11
TAG:	ELF-200N1-08-L1-13
ELE:	400/2700mm TOS
STD:	L11A

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ELE:	400/2700mm TOS
STD:	L11A

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ELE:	8650/10950mm TOS
STD:	L11A

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ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-18
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ELE:	400/2700mm TOS
STD:	L11A

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ELE:	8650/10950mm TOS
STD:	L11A

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ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-09
TAG:	ELF-200N1-08-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-10
TAG:	ELF-200N1-08-L1-12
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-16
TAG:	ELF-200N1-08-L1-18
ELE:	400/2700mm TOS
STD:	L11A

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ELE:	4800/7055mm TOS
STD:	L11A

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ELE:	400/2700mm TOS
STD:	L11A

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STD:	L11A

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ELE:	400/2700mm TOS
STD:	L11A

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ELE:	400/2700mm TOS
STD:	L11A

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ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-08
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ELE:	4800/7055mm TOS
STD:	L11A

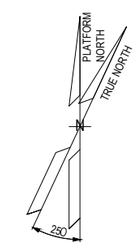
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ELE:	400/2700mm TOS
STD:	L11A

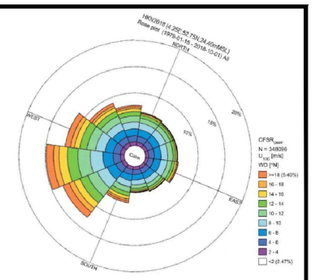
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ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-18
TAG:	ELF-200N1-08-L1-20
ELE:	400/2700mm TOS
STD:	L11A

TAG: ELF-200N1-08-L1-25
ELE: 925 mm TOS
STD: L03A (NOTE 5)

PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

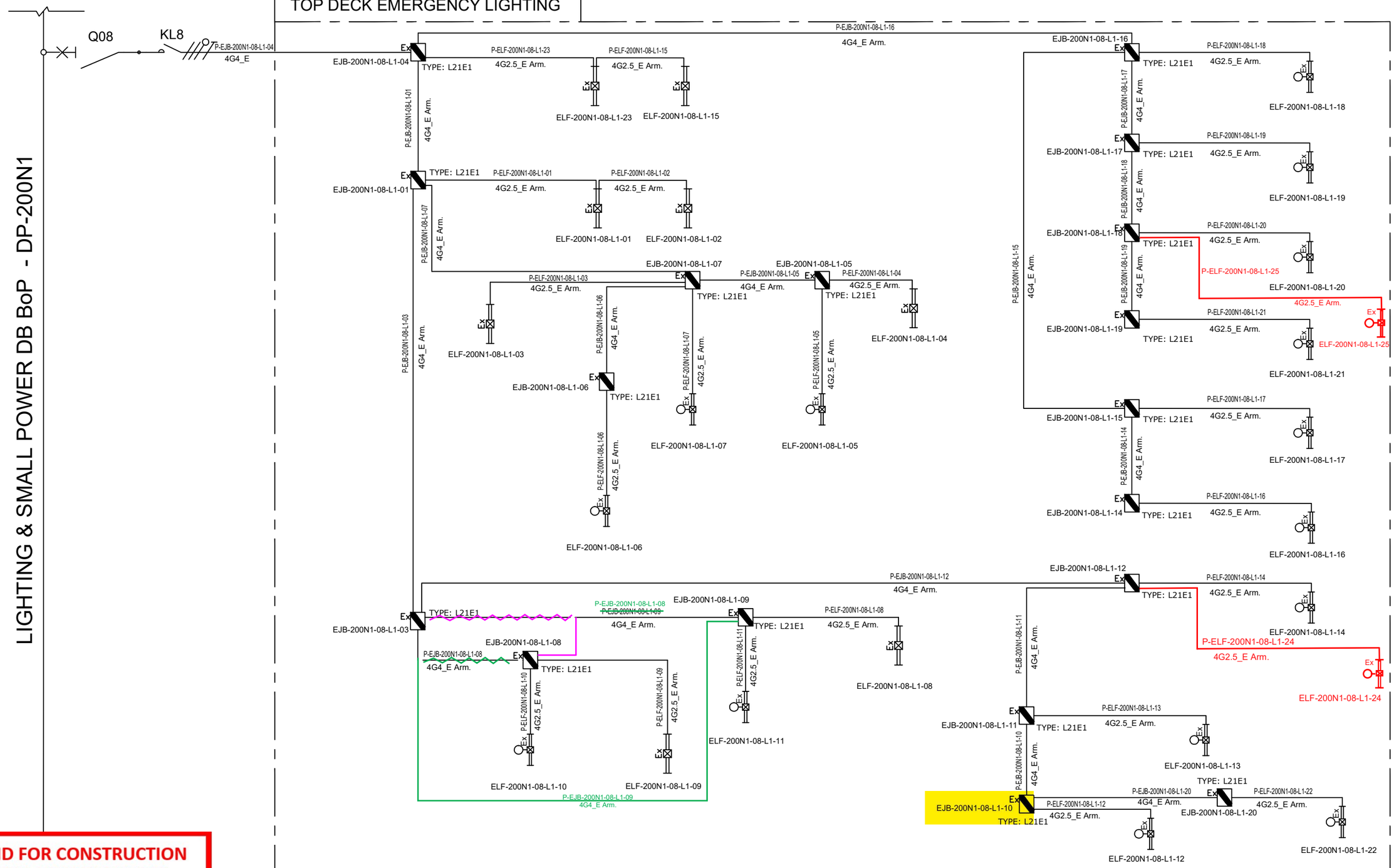
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

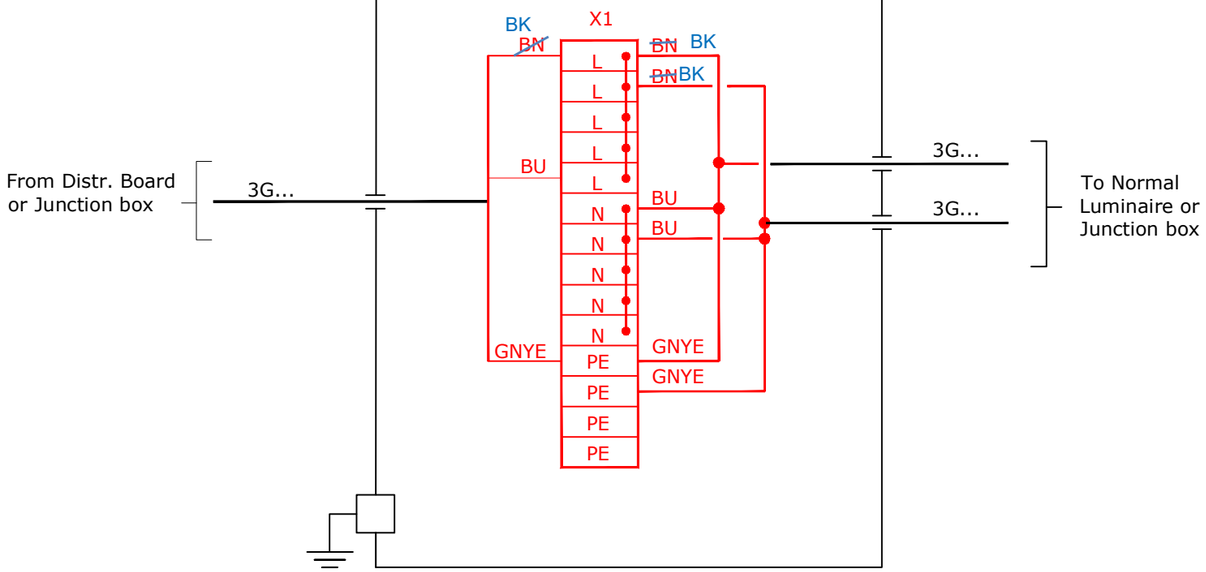
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File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

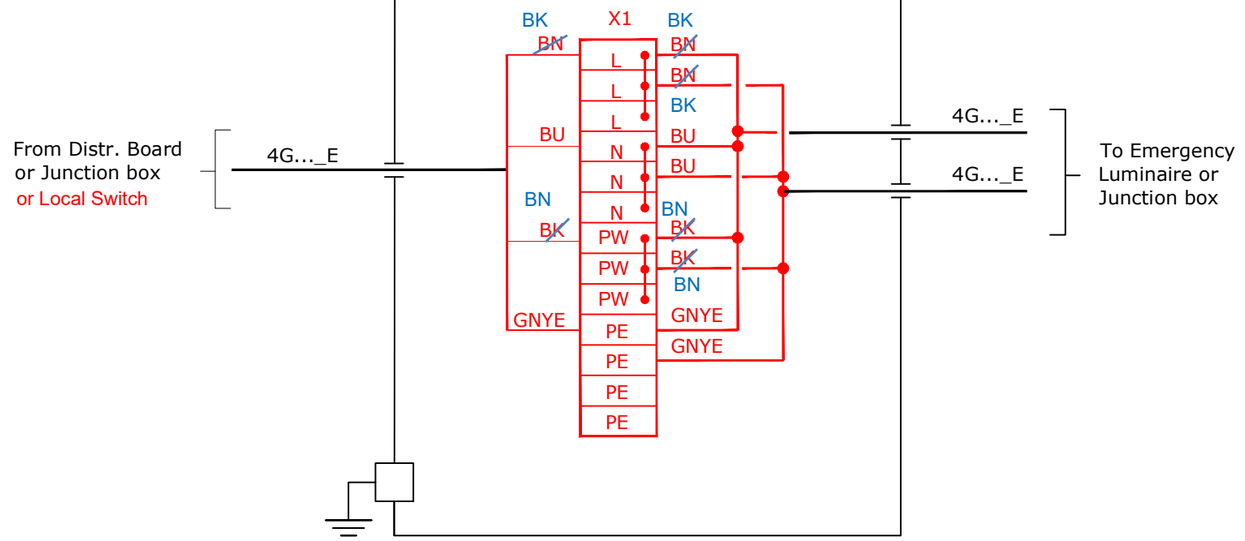
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

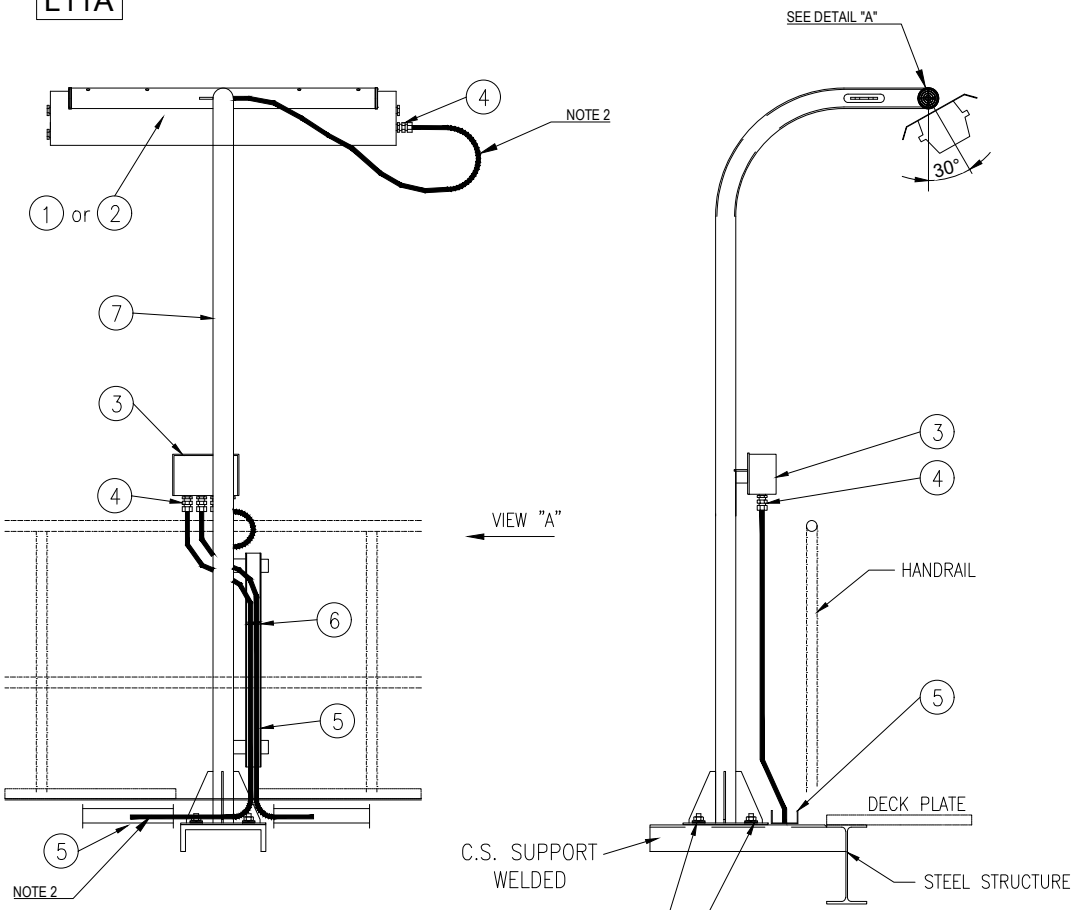
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

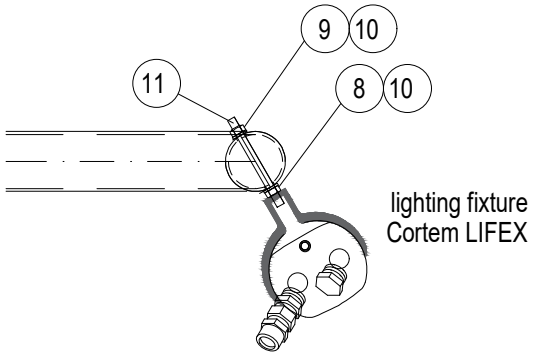
File Name : 123A90-DDL-EL-DG-20125

L11A



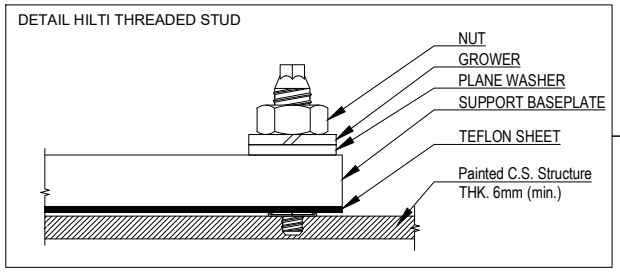
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

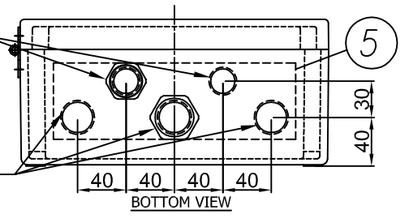
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

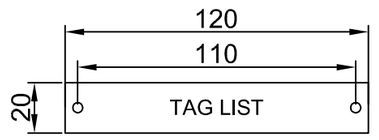
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

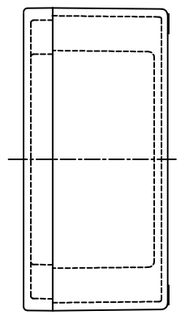
A002MAX

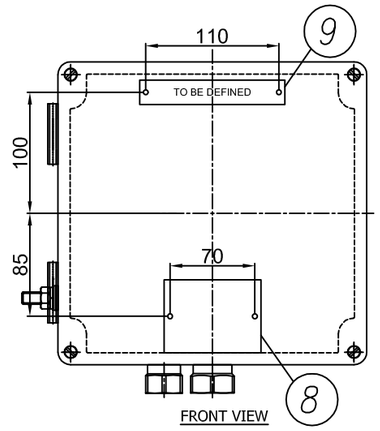
(9) PLATE DETAIL



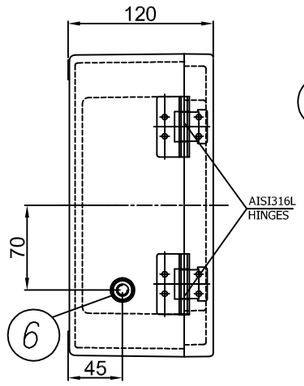
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

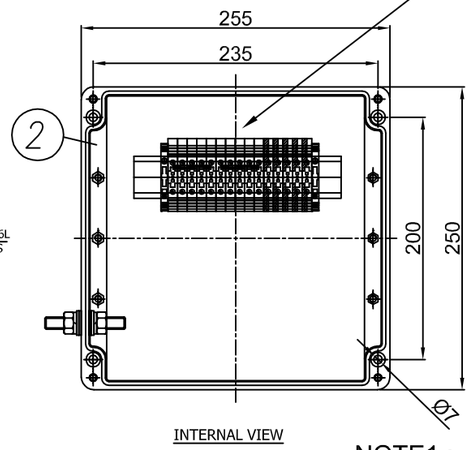

RIGHT VIEW



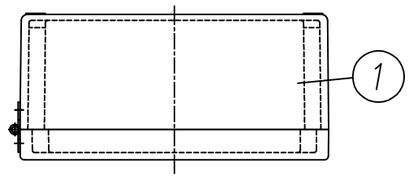
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

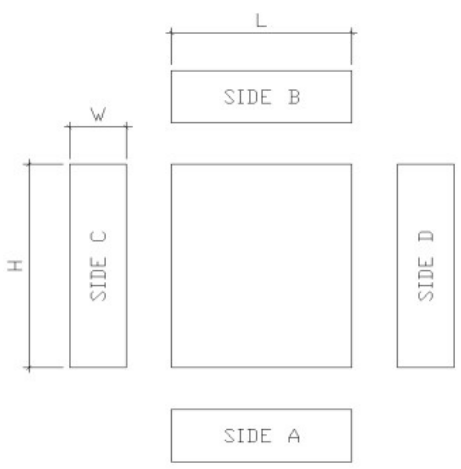
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

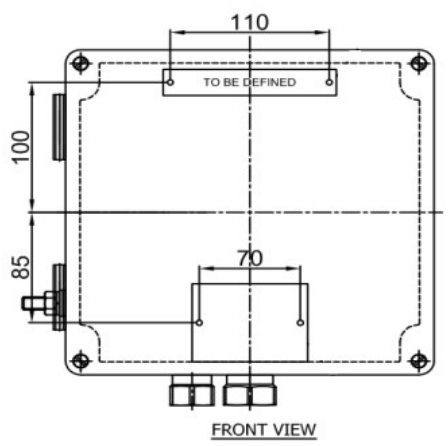
File Name : 1724001481-EL-DA-00003 Rev. 01

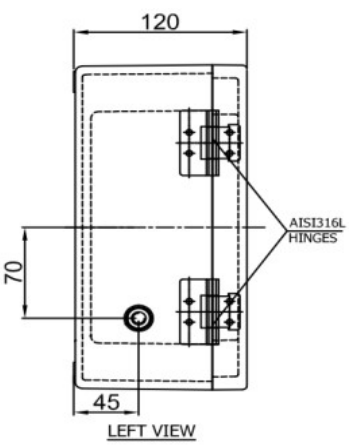
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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This certificate may only be reproduced in its entirety, without any change, schedule included

[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Fiditas Ltd. Karlovačka cesta 197, 10250 Zagreb-Lučko, Croatia
Phone: +385 1 5578565; info@fiditas.com ; www.fiditas.com

[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx FIDI 21.0015X**	Page 1 of 4	Certificate history: Issue 0 (2022-02-18)
Status:	**Current**	Issue No: 1	
Date of Issue:	2023-05-04		

Applicant: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Equipment: **Junction boxes, local control stations and local control panels**

Optional accessory: Model reference: AQ-***P / AQ-***AL / AR-***P / AR-***AL / AQ-***P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT / SB-*** / ST-*** / EFE-*** / EFXE-*** AL/ EFXE-***SB / EFXE-***ST / EFE-***-HT / EFXE-***AL-HT

Type of Protection: **Flameproof enclosure 'db'; Intrinsic safety 'ia/ib'; Increased safety 'eb'; Encapsulation 'mb', Protection by enclosure 'tb'**

Marking: **Ex ia IIC/IIB T6...T4 Ga**(2) or

Ex db eb ia/ib mb [(3)] IIC/IIB T6...T4 Gb(1) or

Ex eb IIC/IIB T6...T4 Gb(1) or

Ex tb IIIC T85°C...T135°C Db

(1) Others type of protection additional to Ex e/eb depending to the components actually mounted.

(2) In case of enclosures containing Ex e/Ex eb terminals and/or Ex ia Ga already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Approved for issue on behalf of the IECEx Certification Body: **Marino Kelava**

Position: **Certification Signatory**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Fiditas Ltd
Slavka Tomerlina 44
HR-10361 Zagreb-Sesvete
Croatia

Fiditas
explosion safety solutions

IECEx Certificate of Conformity

Certificate No.: **IECEx FIDI 21.0015X**

Date of issue: 2023-05-04 Issue No: 1

Manufacturer: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

HR/FIDI/ExTR21.0016/00 HR/FIDI/ExTR21.0016/01

Quality Assessment Report:

FR/INE/QAR08.0002/15

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Junction boxes, local control stations and local control panels series AQ-…..; AR-…..; SB…..; EFE-…..; EFXE-….. use certified enclosures of various sizes, manufactured by Technor Italsmea S.p.A., type: AQ-.... ; AR-....; SB-...; ST- …, certificate IECEx FIDI 21.0012U.

Enclosures coded …-HT are made in glass fiber reinforced polyester resin or in aluminum, and covered by IECEx component certificates: IECEx PTB 08.0003U, enclosure type: 26.****** and IECEx PTB 08.0003U, enclosure type: 25.******.

Enclosures may be equipped with certified Ex equipment or Ex components and Ex terminals listed in manufacturer's documentation. Certified Ex equipment or Ex components and Ex terminals must be used according to data available in related component or equipment certificates, in particular relevant temperature range, voltage and current limitations. The cable glands or plugs, with separate IECEx certificate, made in type of protection ‘eb’ and/or ‘tb’ with appropriate IP protection are mounted according to related manufacturer’s installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

For other description see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Enclosures marked with warning label: “WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS” must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to IEC 60079-14.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
New IECEx certified Ex products added in the Apparatus list according to list given in HR/FIDI/ ExTR 21.0016/01.

Annex:

IECEx FIDI 21.0015X Technor Equipment Annex1 issue1.pdf

Technical description (continued from original certificate)

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
	(5)	Material **SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C to +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP55, IP66 or IP67 depending on model

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

Models sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

Power dissipation – HT aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

Power dissipation – Aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series of enclosure. Exact values are given in manufacturer's documentation.

Warning labels:

WARNING – DO NOT OPEN WHEN ENERGIZED (*)
(*) Not mandatory for apparatus with protection type Ex ia Ga and Ex ib Gb.

WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

To be added when the enclosures or parts of them have a surface resistance more than 10^9 Ω or 10^{11} Ω according to IEC 60079-0 Clause 7.4.2 a), as applicable, and as per following cases:

- are equipped with transparent parts made of polycarbonate.
- for category II 2 G / EPL Gb Gas group IIC: are painted and the paint layer thickness is > 0.2mm.
- for category II 2 G / EPL Gb Gas group IIB: are painted and the paint layer thickness is > 2mm.
- for category II 2 D / EPL Db: are painted and the paint layer thickness is > 2mm.
- for category II 2 G / EPL Gb Gas group IIC: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 2000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 8000mm^2.
- for category II 2 G /EPL Gb Gas group IIB: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 10000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 40000mm^2.

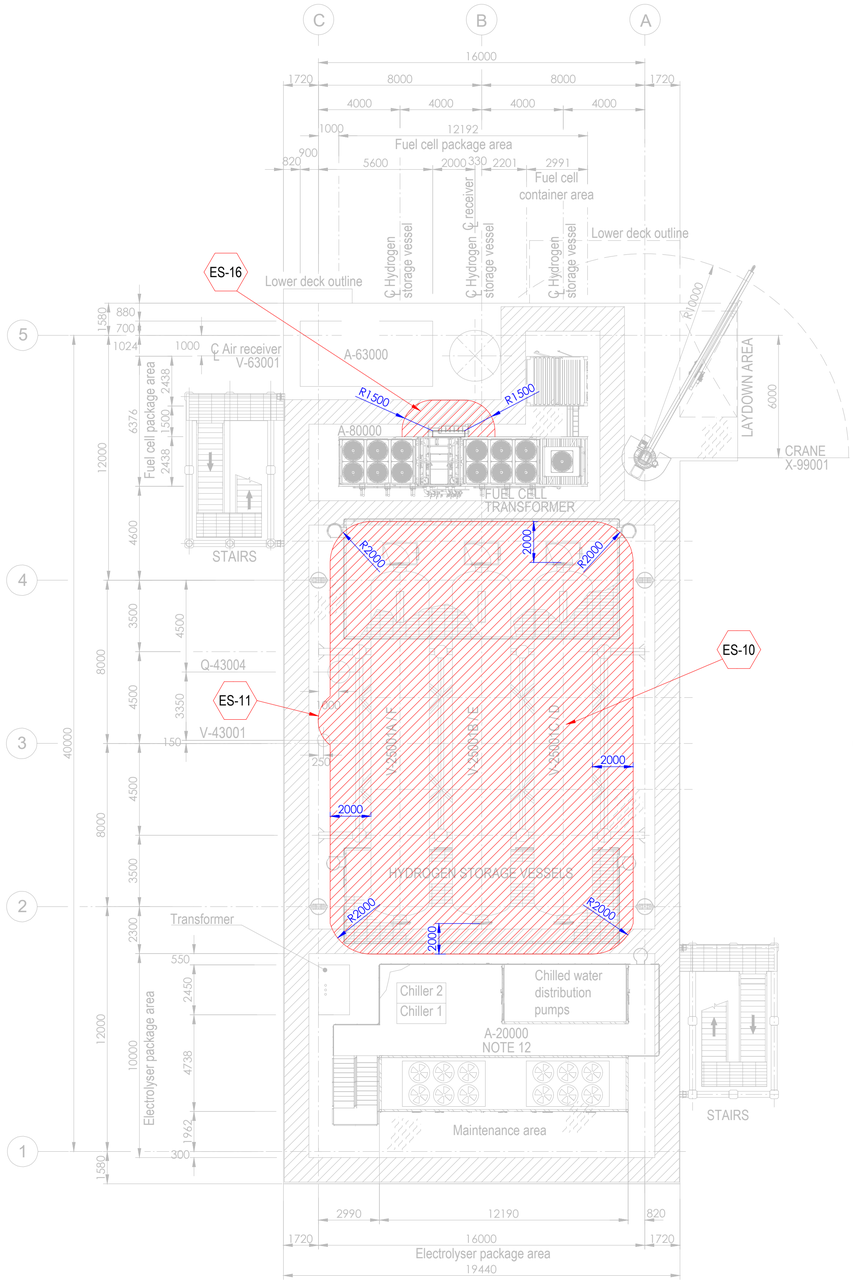
OPEN THE VALVE ONLY WHEN THE APPARATUS IS DE-ENERGIZED AND ONLY WHEN AN EXPLOSIVE DUST ATMOSPHERE IS NOT PRESENT
To be added on Ex tb apparatus equipped with the drain / venting device ECR3.

Other warnings depend on the components actually mounted, according to the component manufacturer's documentation.

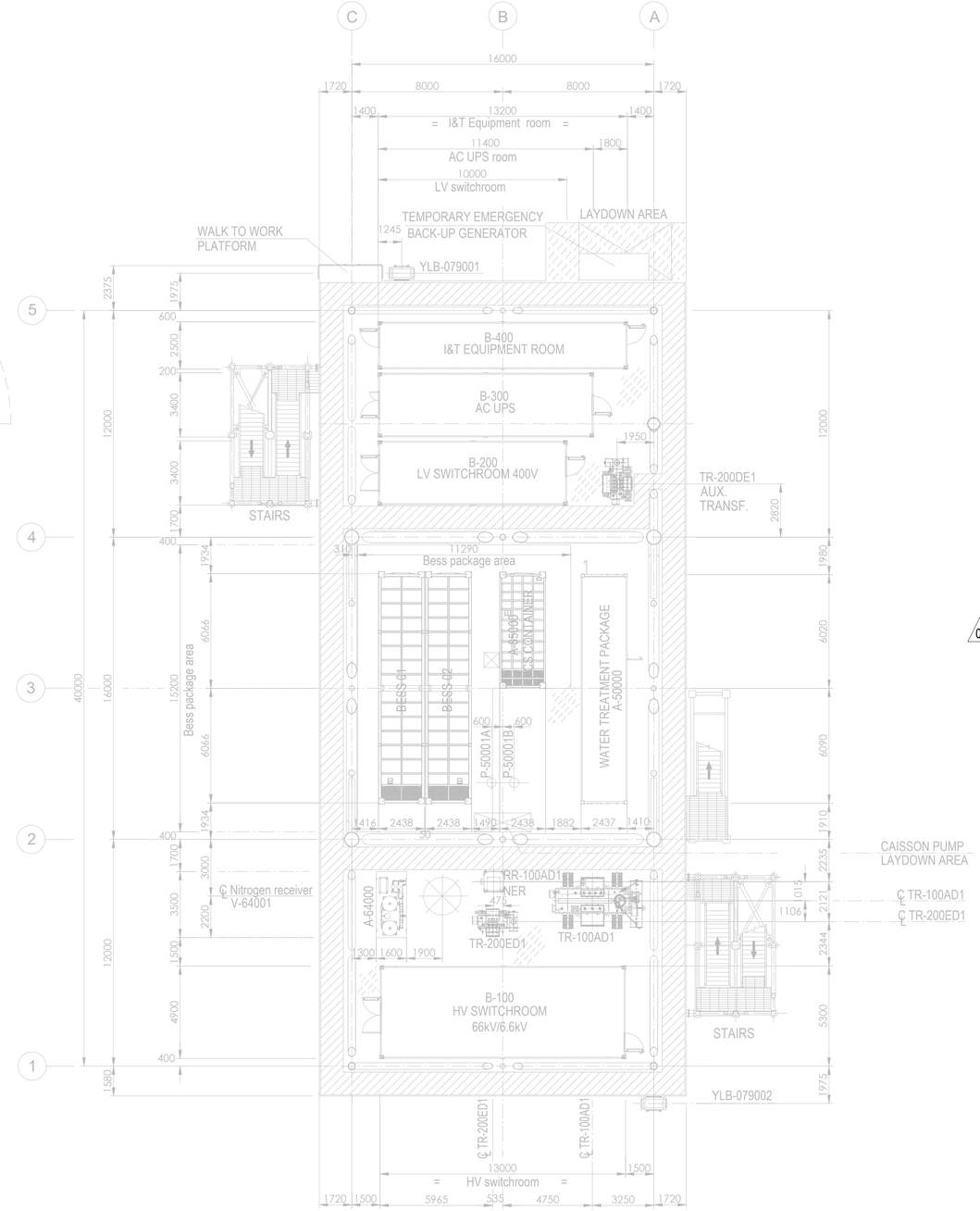
The tables below state the maximum power dissipation values (W) related to the internal temperature (Tint) and ambient temperature (Tamb).

DRAWING NO. 123A90-DDL-SAF-DL-30022

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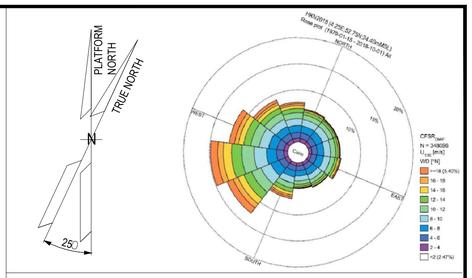
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

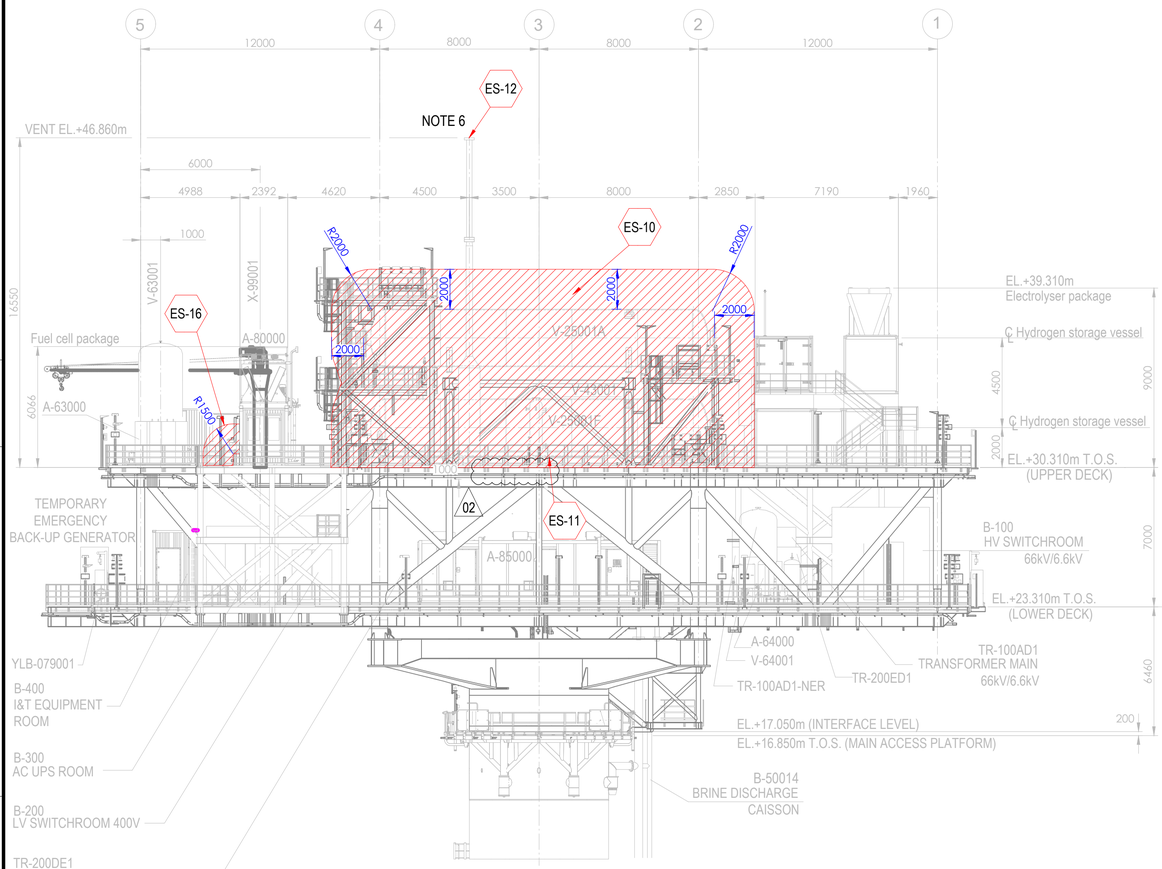
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

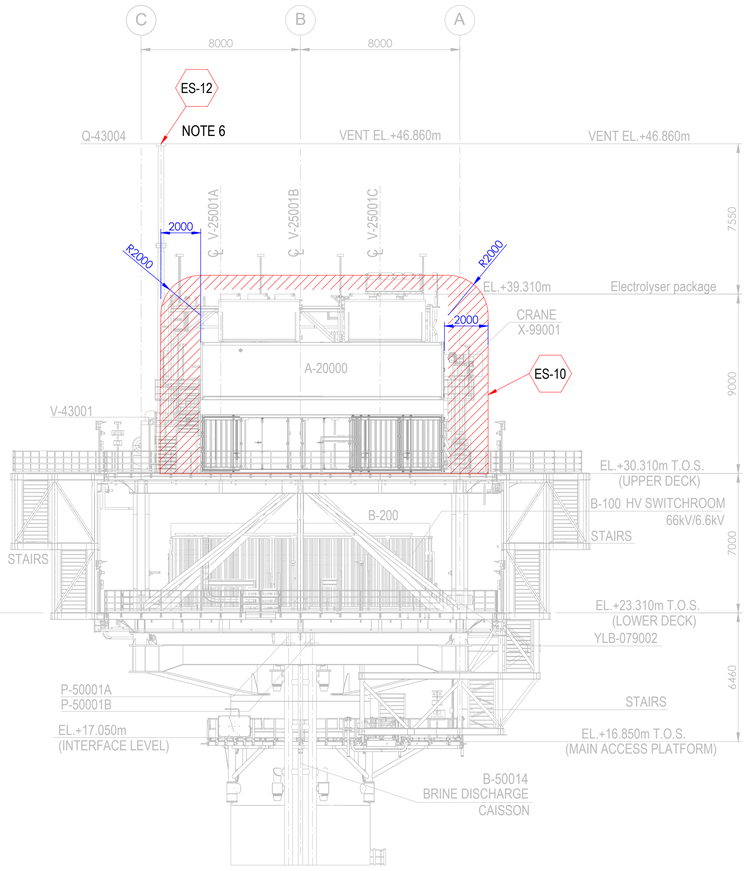
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

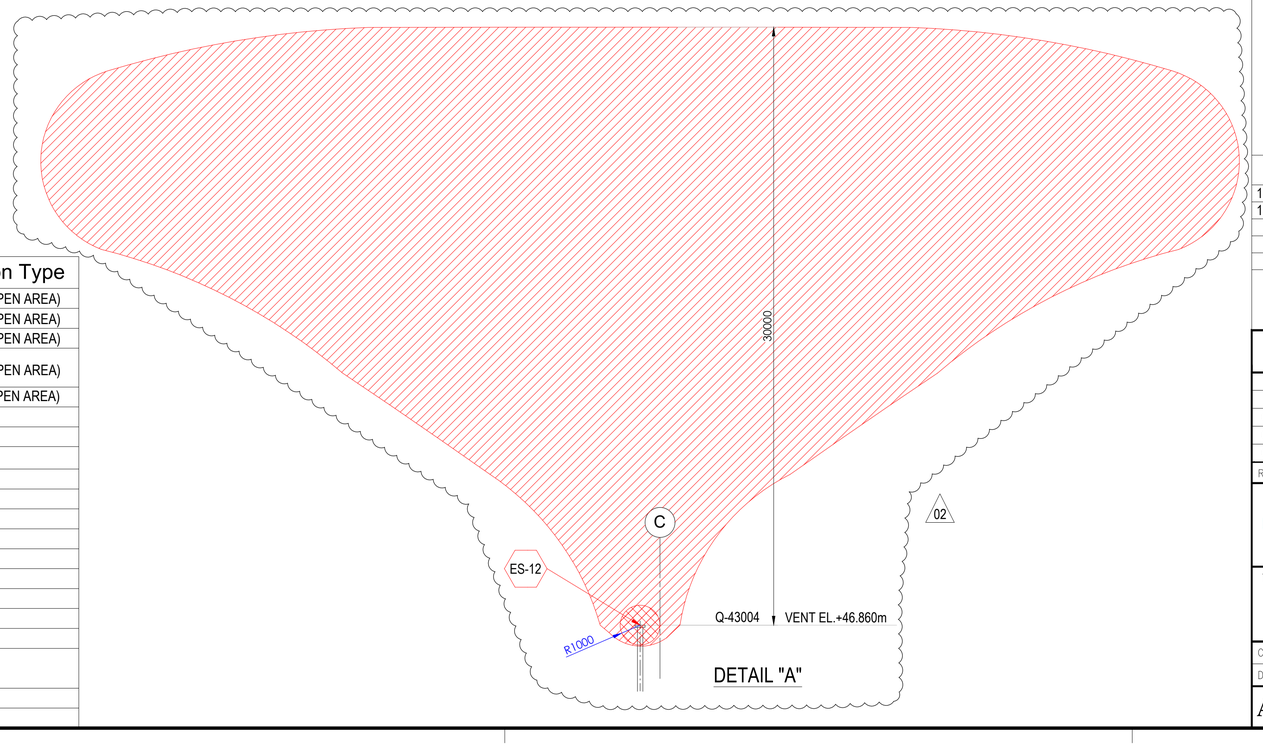


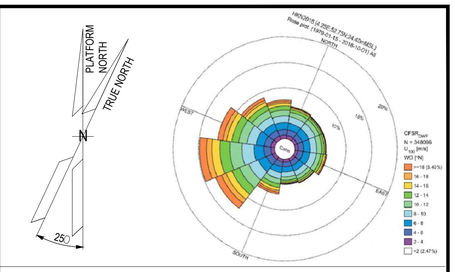
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-11	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001644	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990014			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-FIDI 21 0015 X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-11	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001644		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	EJB-200N1-08-L1-11	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001644	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

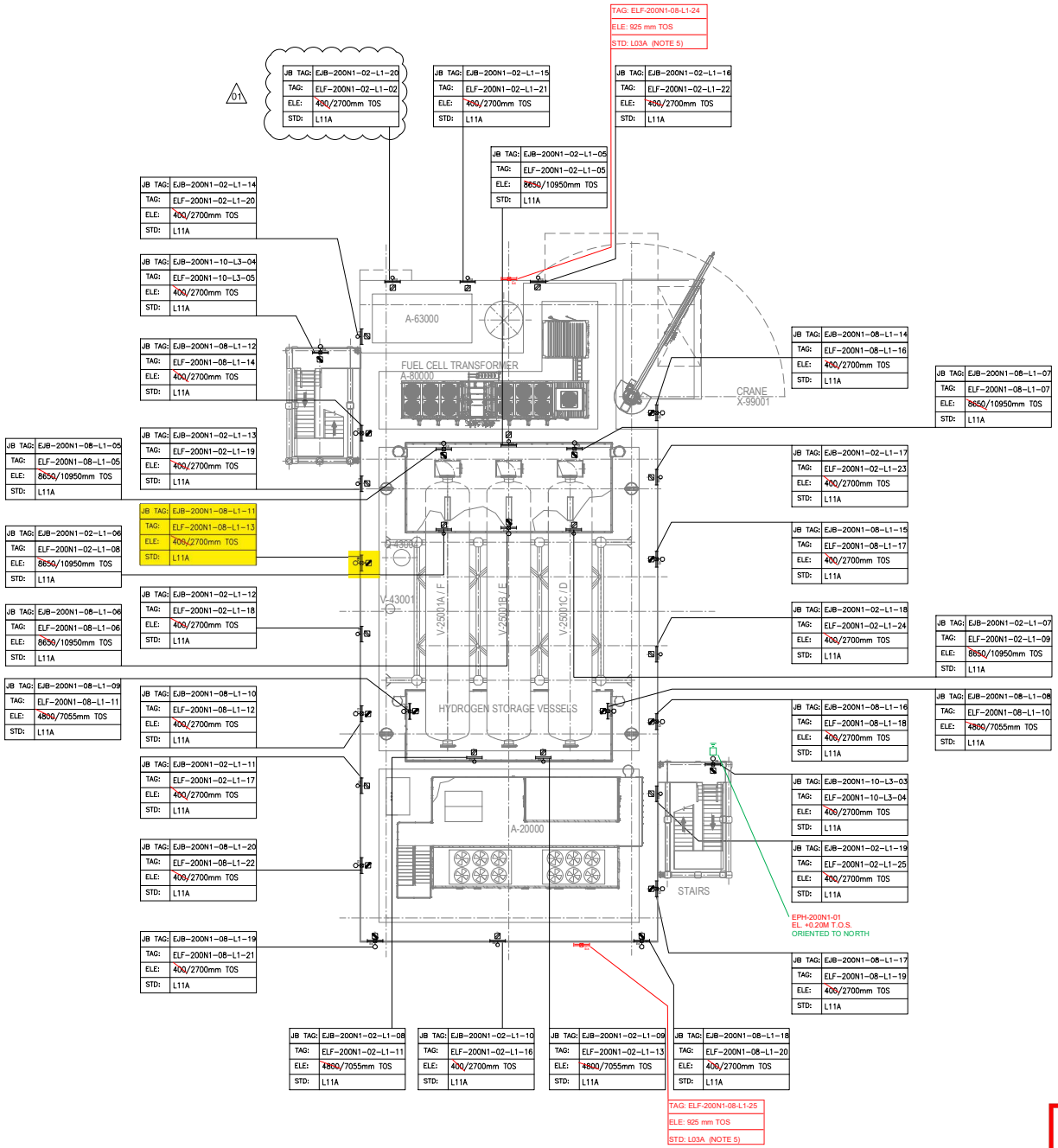
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

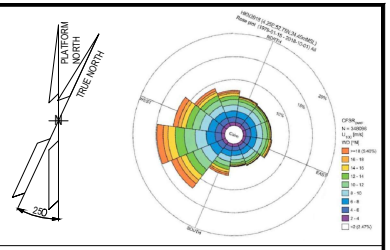
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:31:15.135Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-16T16:57:40.096Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

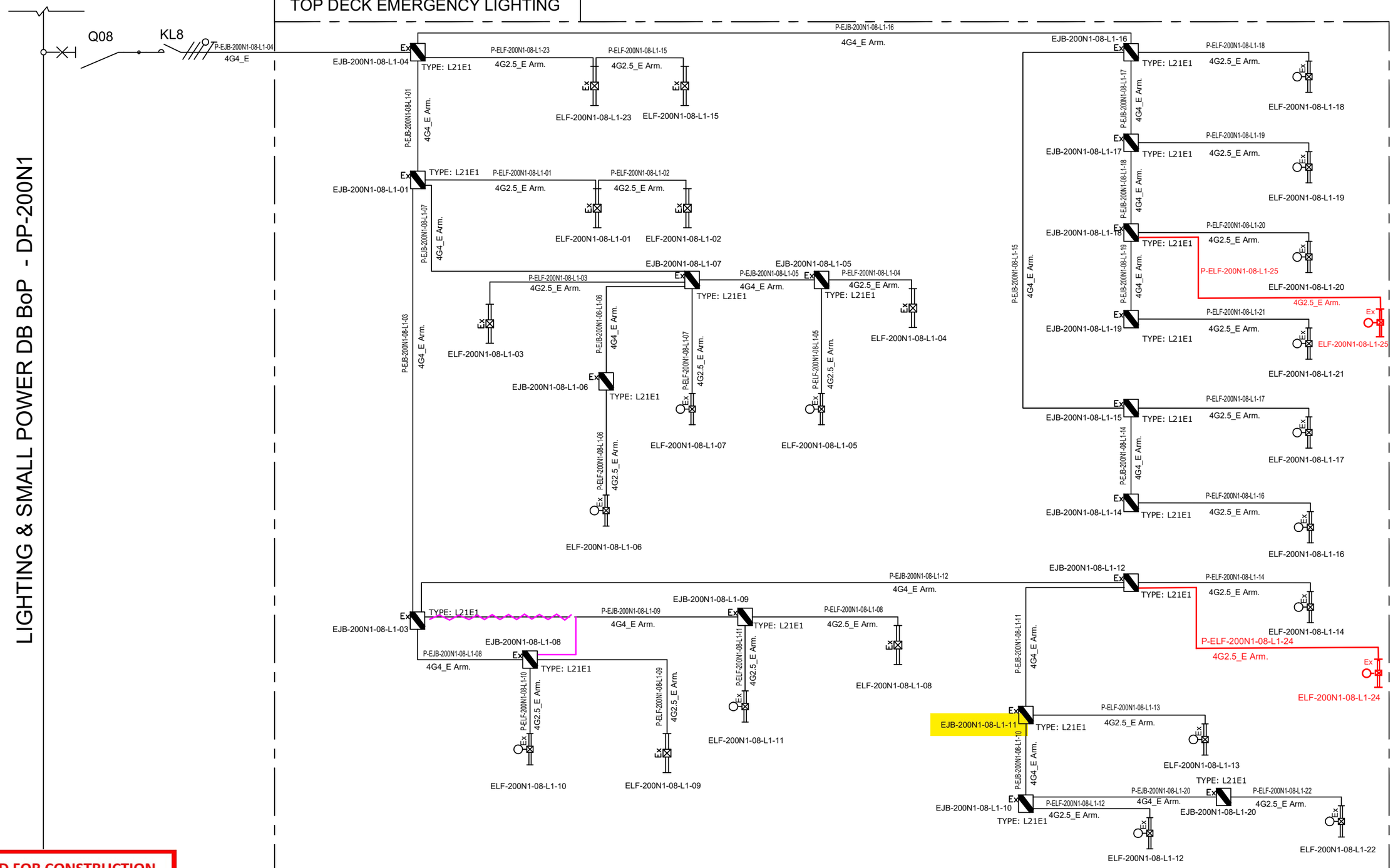
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

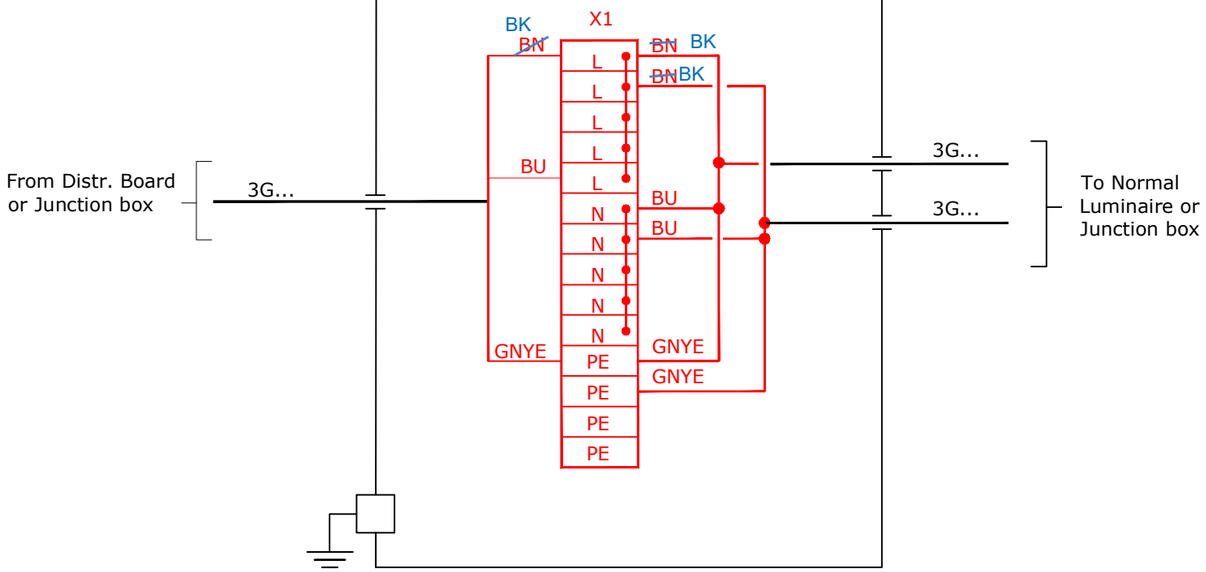
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

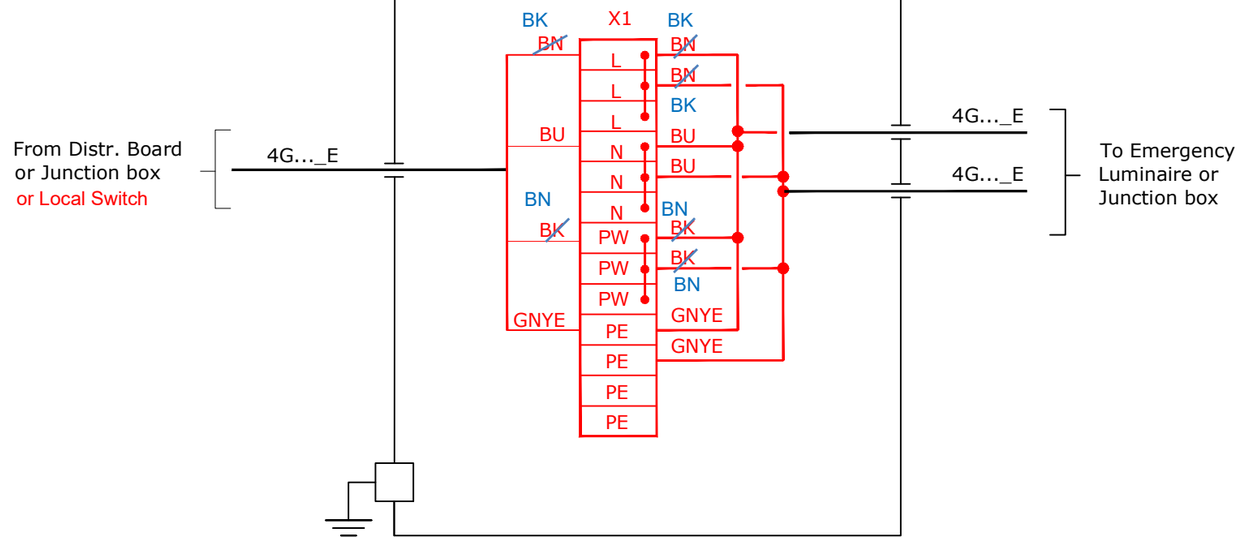
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

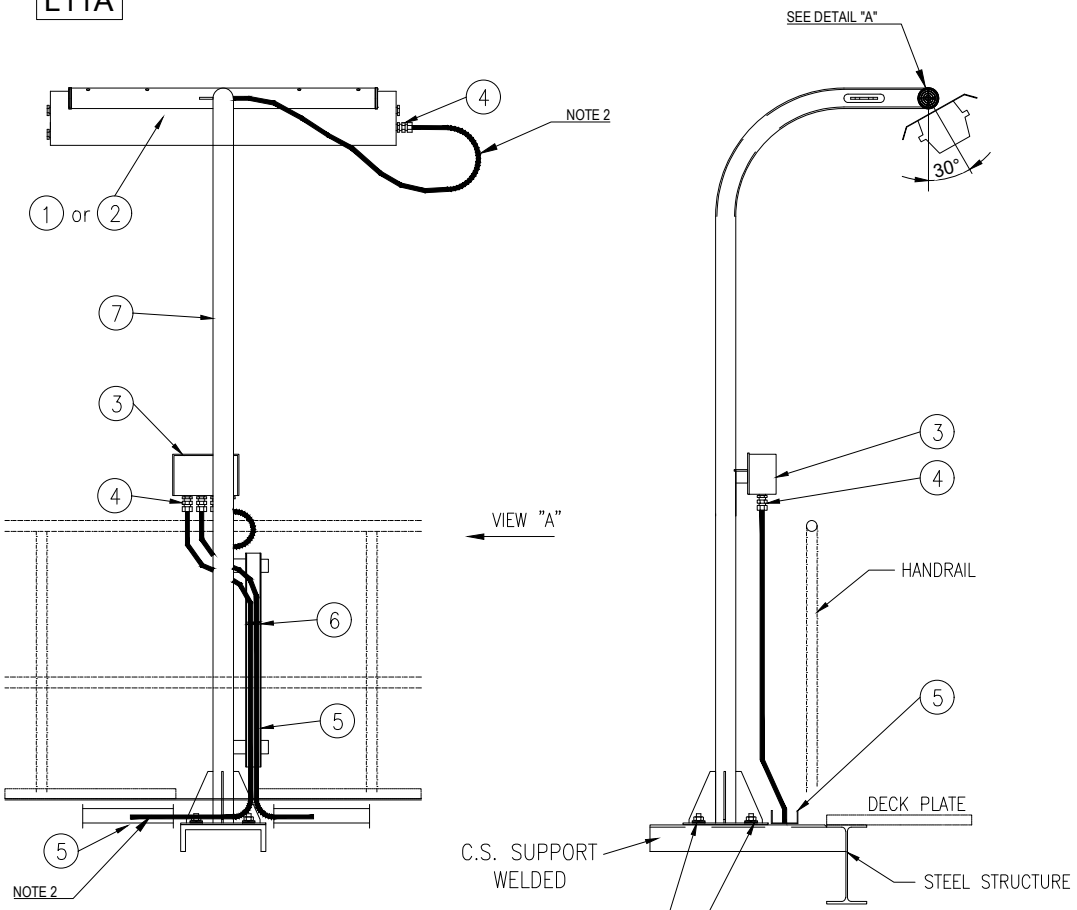
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

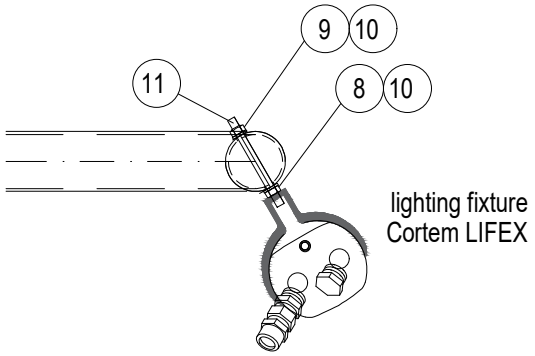
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L11A



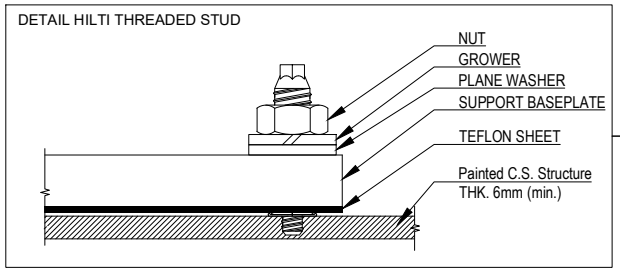
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

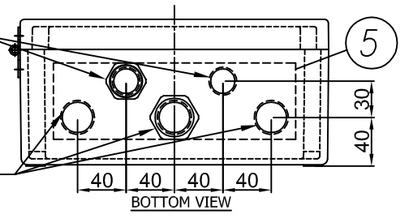
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

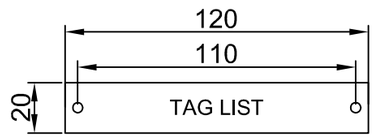
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

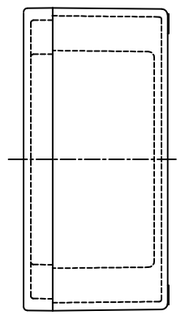
A002MAX

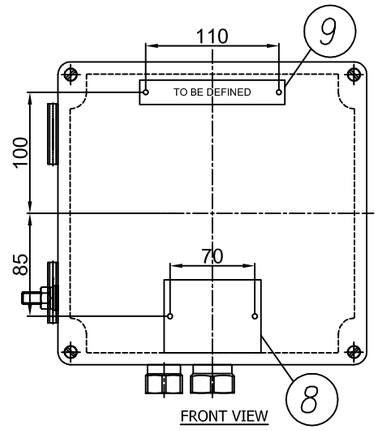
(9) PLATE DETAIL



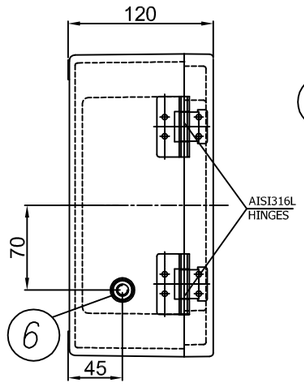
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

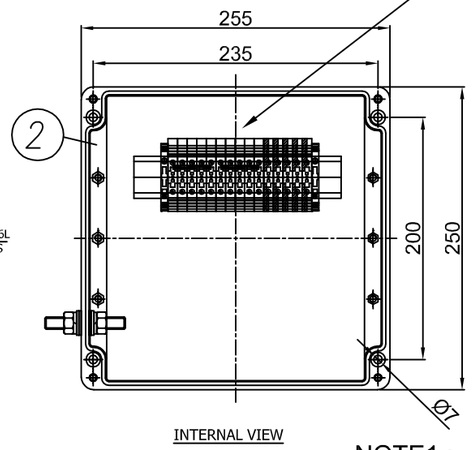

RIGHT VIEW



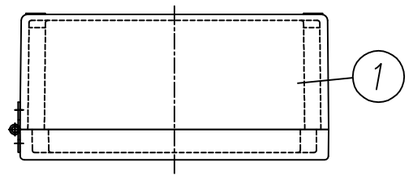
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

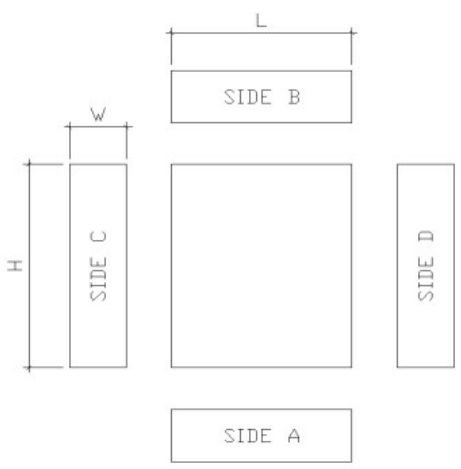
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

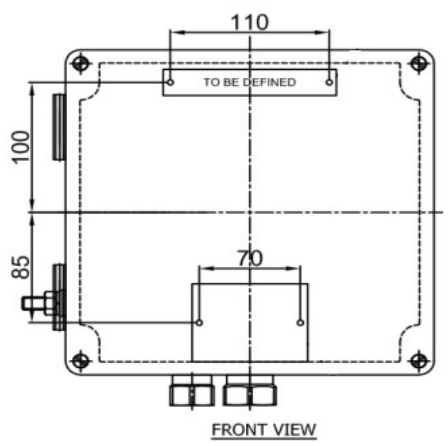
File Name : 1724001481-EL-DA-00003 Rev. 01

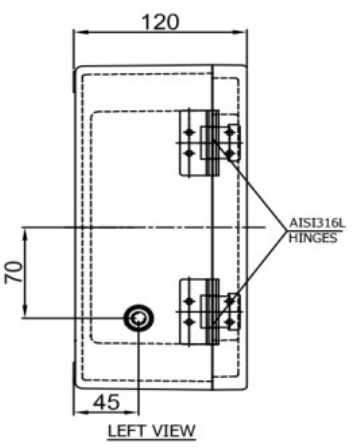
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

Fiditas
explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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This certificate may only be reproduced in its entirety, without any change, schedule included

[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Fiditas Ltd. Karlovačka cesta 197, 10250 Zagreb-Lučko, Croatia
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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx FIDI 21.0015X**	Page 1 of 4	Certificate history: Issue 0 (2022-02-18)
Status:	**Current**	Issue No: 1	
Date of Issue:	2023-05-04		

Applicant: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Equipment: **Junction boxes, local control stations and local control panels**

Optional accessory: Model reference: AQ-***P / AQ-***AL / AR-***P / AR-***AL / AQ-***P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT / SB-*** / ST-*** / EFE-*** / EFXE-*** AL/ EFXE-***SB / EFXE-***ST / EFE-***-HT / EFXE-***AL-HT

Type of Protection: **Flameproof enclosure 'db'; Intrinsic safety 'ia/ib'; Increased safety 'eb'; Encapsulation 'mb', Protection by enclosure 'tb'**

Marking: **Ex ia IIC/IIB T6...T4 Ga**(2) or

Ex db eb ia/ib mb [(3)] IIC/IIB T6...T4 Gb(1) or

Ex eb IIC/IIB T6...T4 Gb(1) or

Ex tb IIIC T85°C...T135°C Db

(1) Others type of protection additional to Ex e/eb depending to the components actually mounted.

(2) In case of enclosures containing Ex e/Ex eb terminals and/or Ex ia Ga already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Approved for issue on behalf of the IECEx Certification Body: **Marino Kelava**

Position: **Certification Signatory**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Fiditas Ltd
Slavka Tomerlina 44
HR-10361 Zagreb-Sesvete
Croatia

Fiditas
explosion safety solutions

IECEx Certificate of Conformity

Certificate No.: **IECEx FIDI 21.0015X**

Date of issue: 2023-05-04 Issue No: 1

Manufacturer: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

HR/FIDI/ExTR21.0016/00 HR/FIDI/ExTR21.0016/01

Quality Assessment Report:

FR/INE/QAR08.0002/15

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Junction boxes, local control stations and local control panels series AQ-…..; AR-…..; SB…..; EFE-…..; EFXE-….. use certified enclosures of various sizes, manufactured by Technor Italsmea S.p.A., type: AQ-.... ; AR-....; SB-...; ST- …, certificate IECEx FIDI 21.0012U.

Enclosures coded …-HT are made in glass fiber reinforced polyester resin or in aluminum, and covered by IECEx component certificates: IECEx PTB 08.0003U, enclosure type: 26.****** and IECEx PTB 08.0003U, enclosure type: 25.******.

Enclosures may be equipped with certified Ex equipment or Ex components and Ex terminals listed in manufacturer's documentation. Certified Ex equipment or Ex components and Ex terminals must be used according to data available in related component or equipment certificates, in particular relevant temperature range, voltage and current limitations. The cable glands or plugs, with separate IECEx certificate, made in type of protection ‘eb’ and/or ‘tb’ with appropriate IP protection are mounted according to related manufacturer’s installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

For other description see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Enclosures marked with warning label: “WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS” must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to IEC 60079-14.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
New IECEx certified Ex products added in the Apparatus list according to list given in HR/FIDI/ ExTR 21.0016/01.

Annex:

IECEx FIDI 21.0015X Technor Equipment Annex1 issue1.pdf

Technical description (continued from original certificate)

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
	(5)	Material **SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C to +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP55, IP66 or IP67 depending on model

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

Models sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

Power dissipation – HT aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

Power dissipation – Aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series of enclosure. Exact values are given in manufacturer's documentation.

Warning labels:

WARNING – DO NOT OPEN WHEN ENERGIZED (*)
(*) Not mandatory for apparatus with protection type Ex ia Ga and Ex ib Gb.

WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

To be added when the enclosures or parts of them have a surface resistance more than 10^9 Ω or 10^{11} Ω according to IEC 60079-0 Clause 7.4.2 a), as applicable, and as per following cases:

- are equipped with transparent parts made of polycarbonate.
- for category II 2 G / EPL Gb Gas group IIC: are painted and the paint layer thickness is > 0.2mm.
- for category II 2 G / EPL Gb Gas group IIB: are painted and the paint layer thickness is > 2mm.
- for category II 2 D / EPL Db: are painted and the paint layer thickness is > 2mm.
- for category II 2 G / EPL Gb Gas group IIC: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 2000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 8000mm^2.
- for category II 2 G /EPL Gb Gas group IIB: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 10000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 40000mm^2.

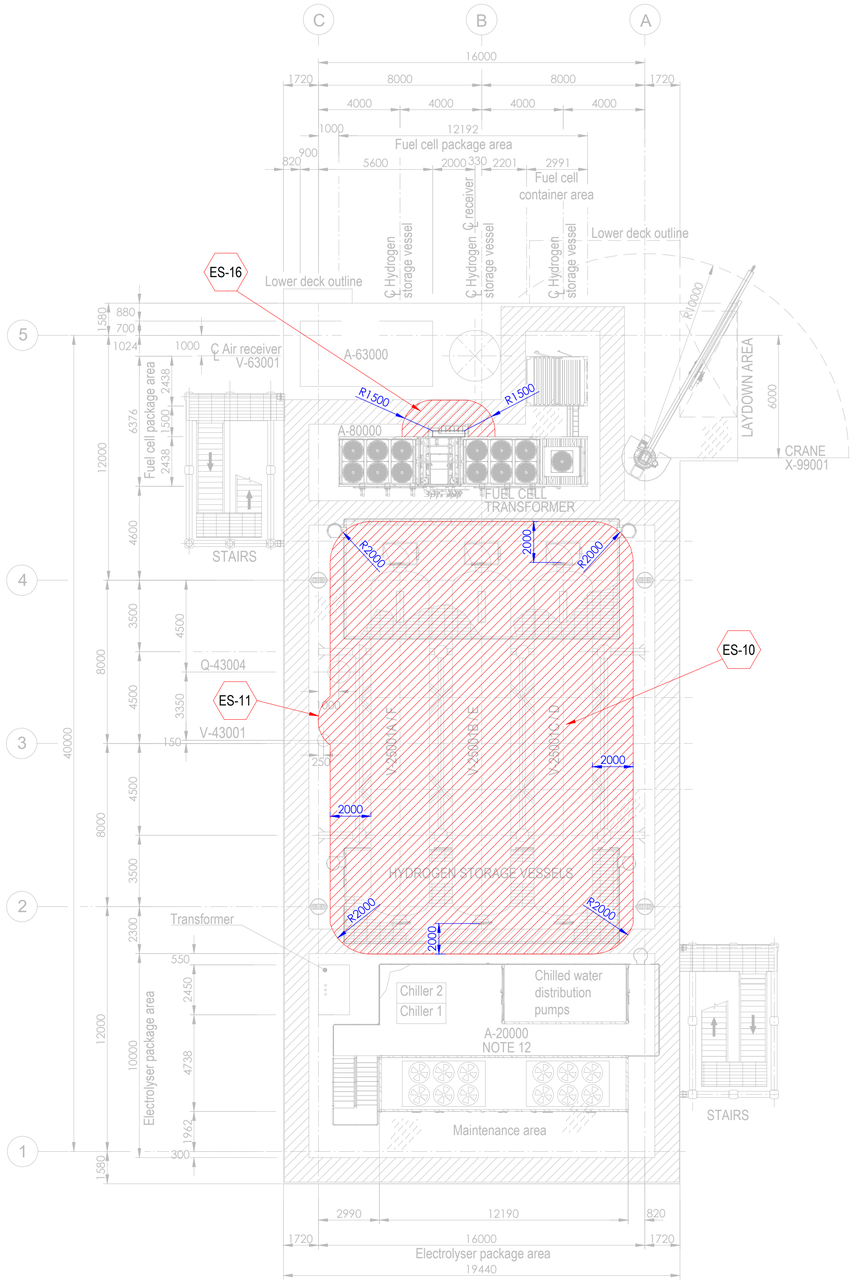
OPEN THE VALVE ONLY WHEN THE APPARATUS IS DE-ENERGIZED AND ONLY WHEN AN EXPLOSIVE DUST ATMOSPHERE IS NOT PRESENT
To be added on Ex tb apparatus equipped with the drain / venting device ECR3.

Other warnings depend on the components actually mounted, according to the component manufacturer's documentation.

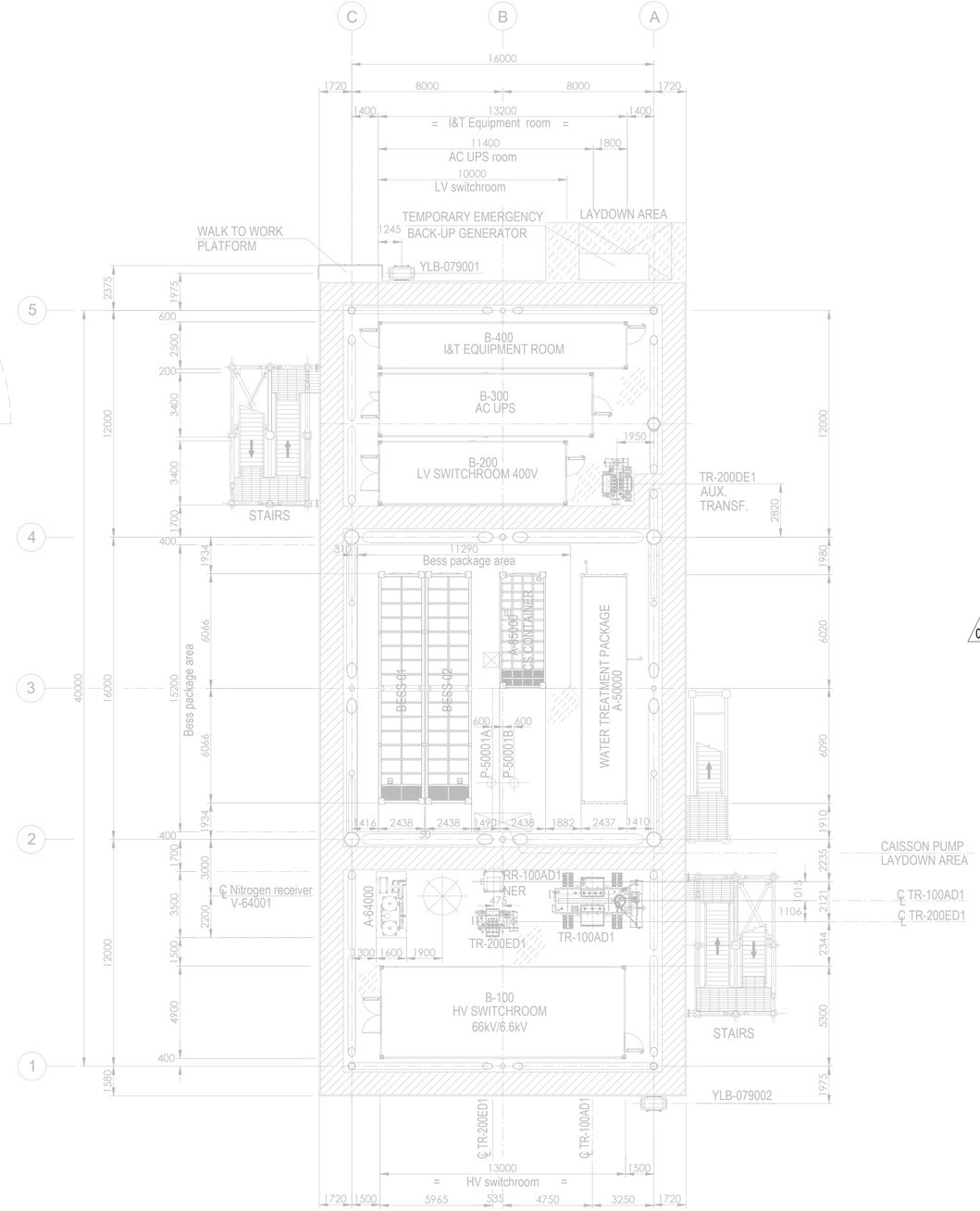
The tables below state the maximum power dissipation values (W) related to the internal temperature (Tint) and ambient temperature (Tamb).

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



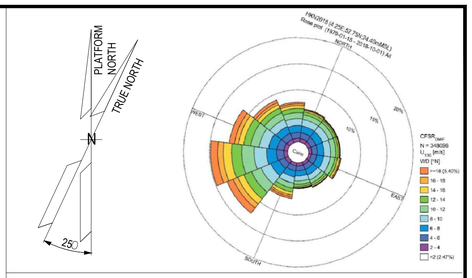
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

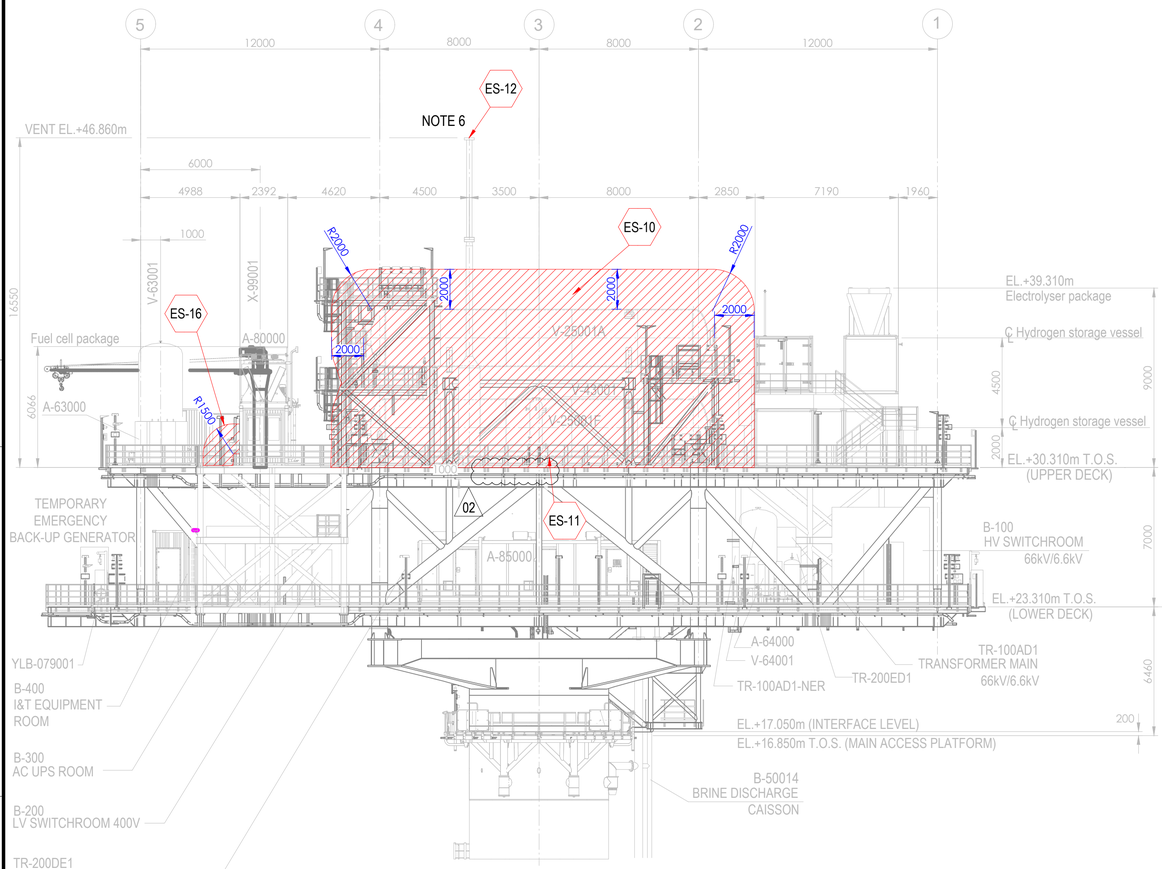
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

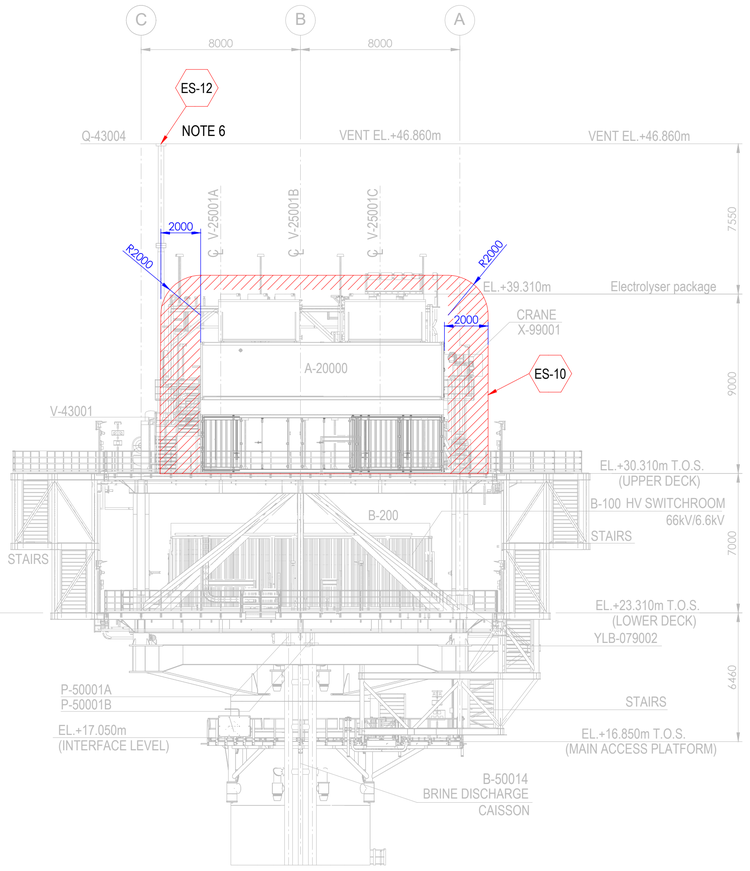
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

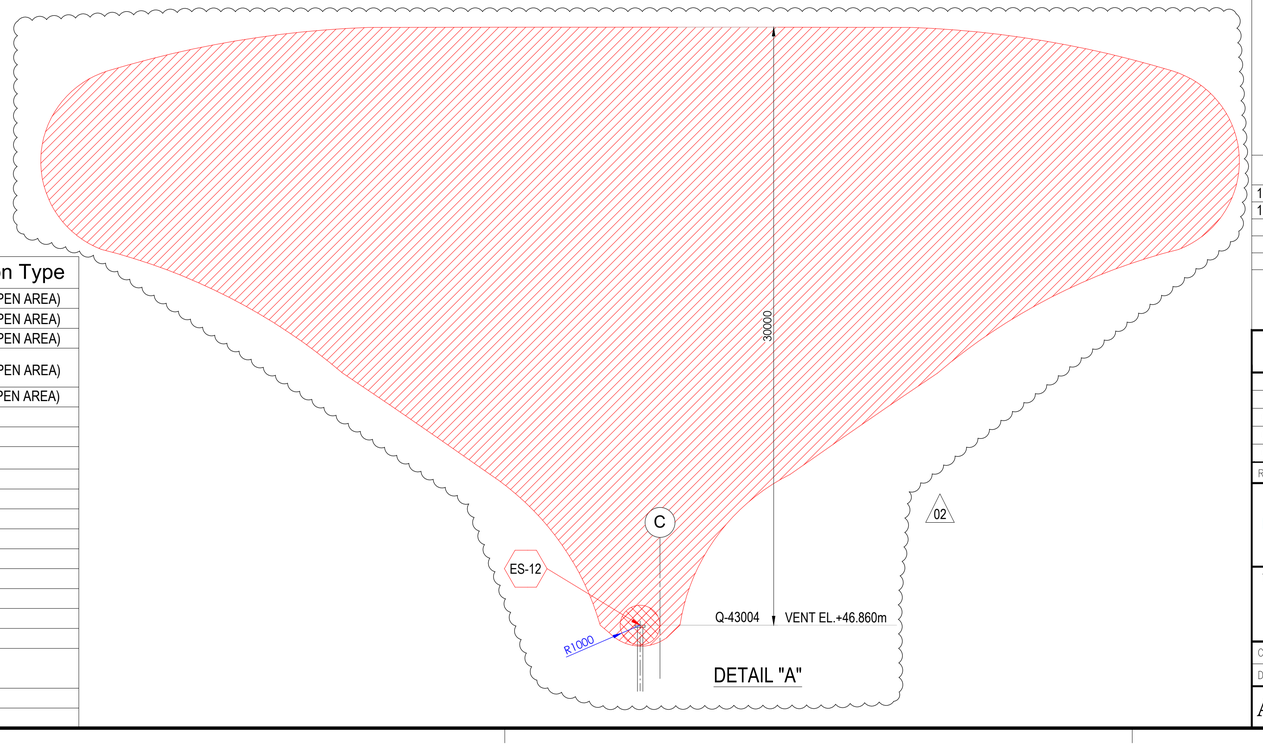


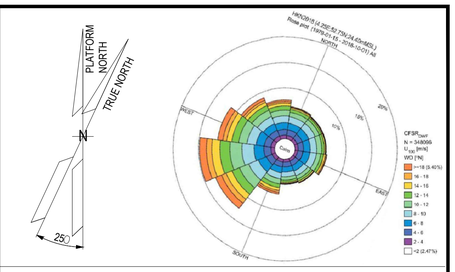
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-12	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001645	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990015			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-FIDI 21 0015 X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	II C	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	II C	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-12	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001645		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-12	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001645	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

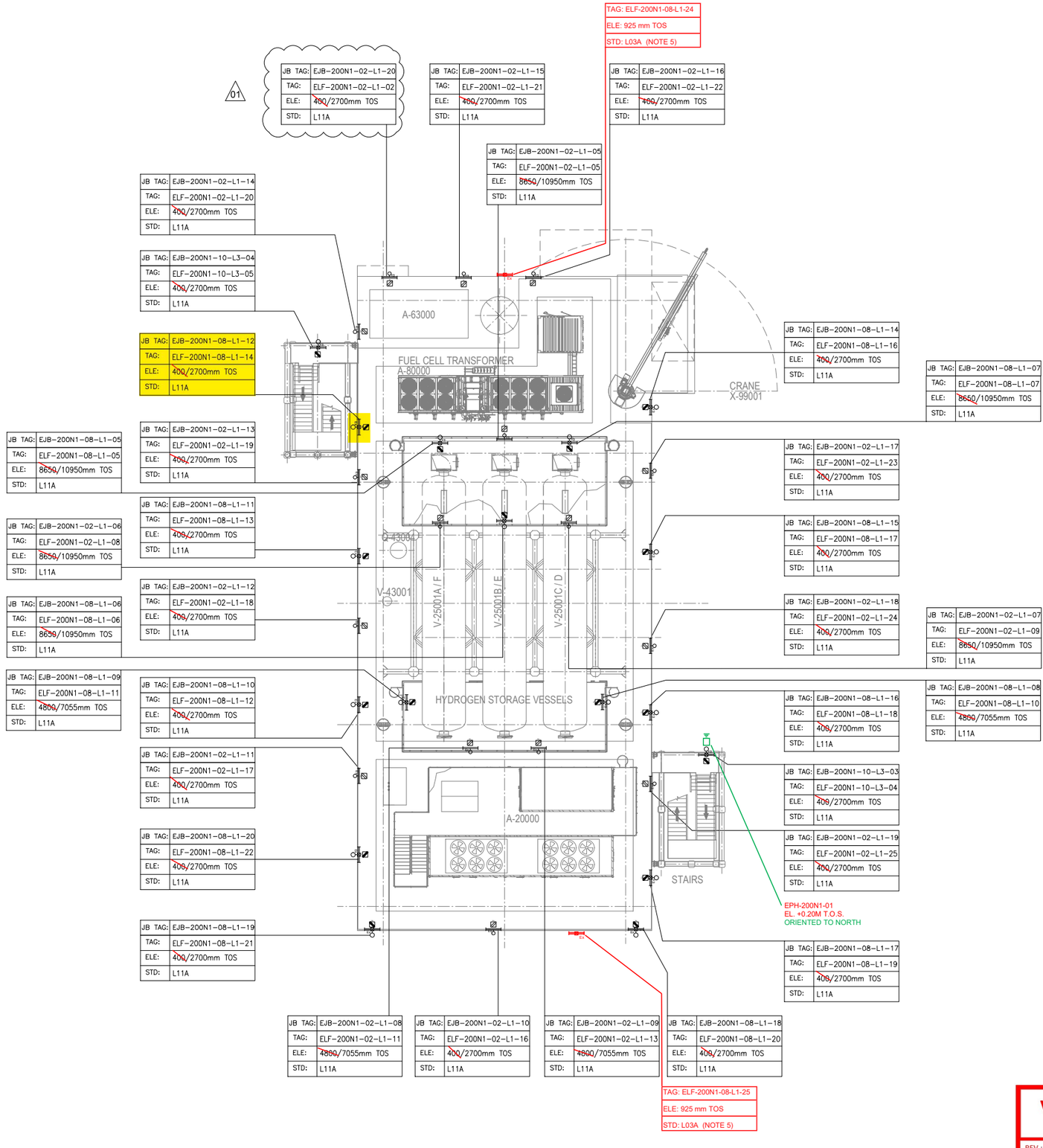
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

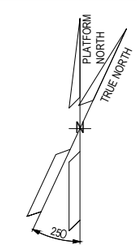
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Andrea Andreani	
Date	2025-01-10	2025-01-23	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:31:29.468Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-23T16:40:39.217Z	

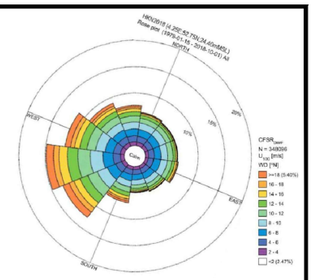
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150	
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. → EJB-200N1-08-L1-01

EJB-200N1-08-L1-01 — TYPE: L21E1
- P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
- P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm. → EJB-200N1-08-L1-07

EJB-200N1-08-L1-07 — TYPE: L21E1
- P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
- P-EJB-200N1-08-L1-06 — 4G4_E Arm. → EJB-200N1-08-L1-06
- P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
- P-EJB-200N1-08-L1-05 — 4G4_E Arm. → EJB-200N1-08-L1-05

EJB-200N1-08-L1-05 — TYPE: L21E1
- P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
- P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

EJB-200N1-08-L1-06 — TYPE: L21E1
- P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

EJB-200N1-08-L1-16 — TYPE: L21E1
- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm.

EJB-200N1-08-L1-17 — TYPE: L21E1
- P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
- P-EJB-200N1-08-L1-18 — 4G4_E Arm.

EJB-200N1-08-L1-18 — TYPE: L21E1
- P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
- P-EJB-200N1-08-L1-19 — 4G4_E Arm.
- P-EJB-200N1-08-L1-15 — 4G4_E Arm.

EJB-200N1-08-L1-19 — TYPE: L21E1
- P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
- P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25

EJB-200N1-08-L1-15 — TYPE: L21E1
- P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
- P-EJB-200N1-08-L1-14 — 4G4_E Arm.

EJB-200N1-08-L1-14 — TYPE: L21E1
- P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

P-EJB-200N1-08-L1-12 — 4G4_E Arm.

EJB-200N1-08-L1-12 — TYPE: L21E1
- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

EJB-200N1-08-L1-03 — TYPE: L21E1
- P-EJB-200N1-08-L1-08 — 4G4_E Arm. → EJB-200N1-08-L1-08
- P-EJB-200N1-08-L1-09 — 4G4_E Arm. → EJB-200N1-08-L1-09

EJB-200N1-08-L1-08 — TYPE: L21E1
- P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
- P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09

EJB-200N1-08-L1-09 — TYPE: L21E1
- P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
- P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11

EJB-200N1-08-L1-11 — TYPE: L21E1
- P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
- P-EJB-200N1-08-L1-10 — 4G4_E Arm.

EJB-200N1-08-L1-10 — TYPE: L21E1
- P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12
- P-EJB-200N1-08-L1-20 — 4G4_E Arm.

EJB-200N1-08-L1-20 — TYPE: L21E1
- P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22

P-EJB-200N1-08-L1-09 — 4G4_E Arm.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DG-20125 | SHEET 011 | REV. 01

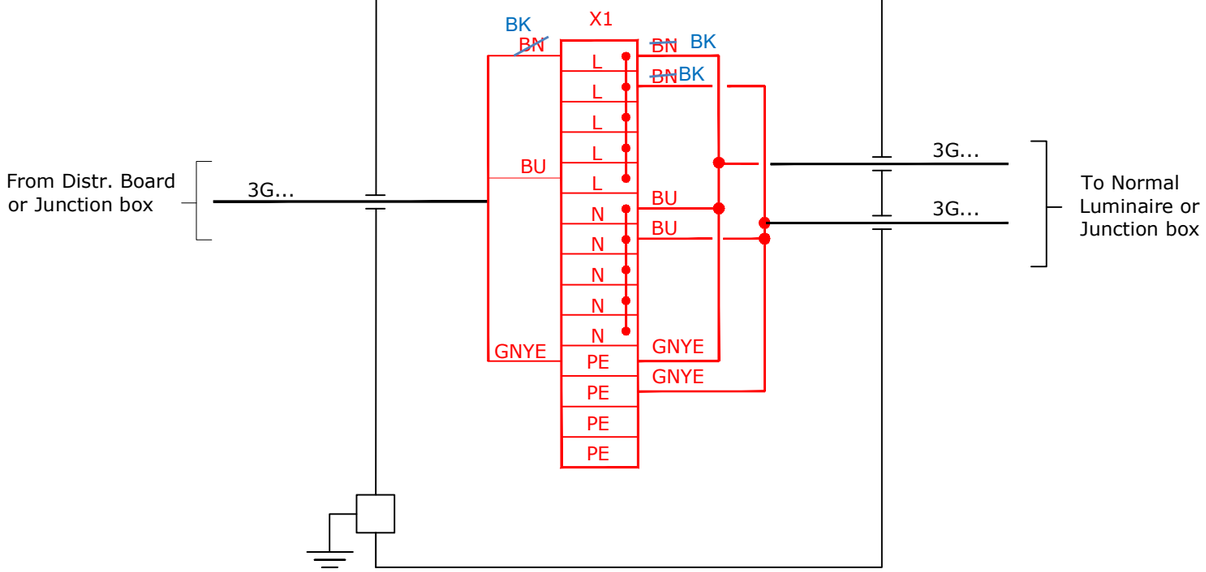
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

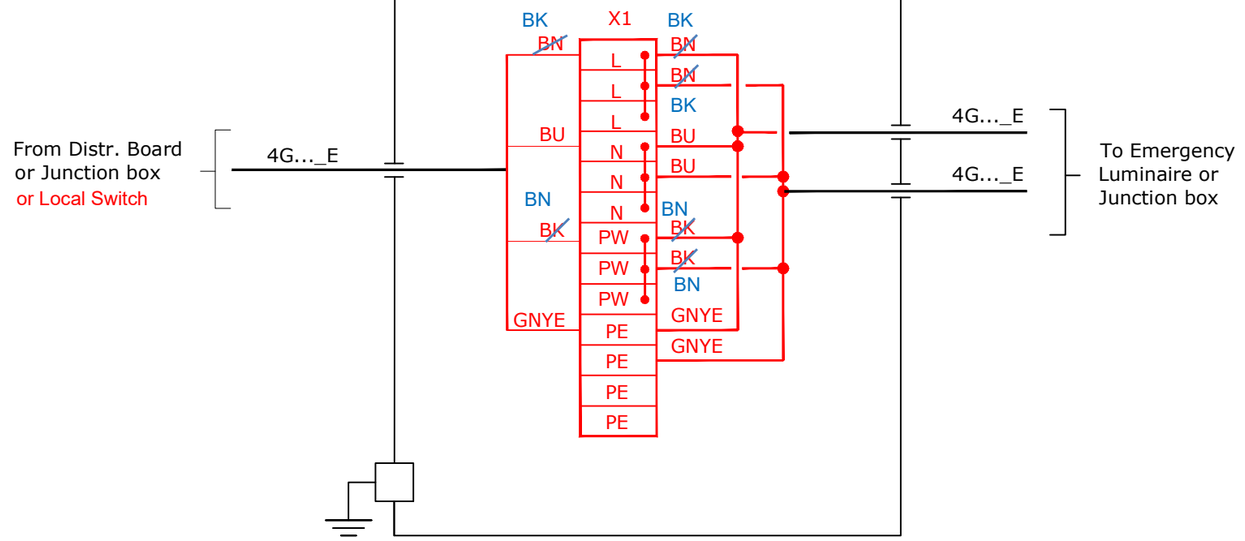
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

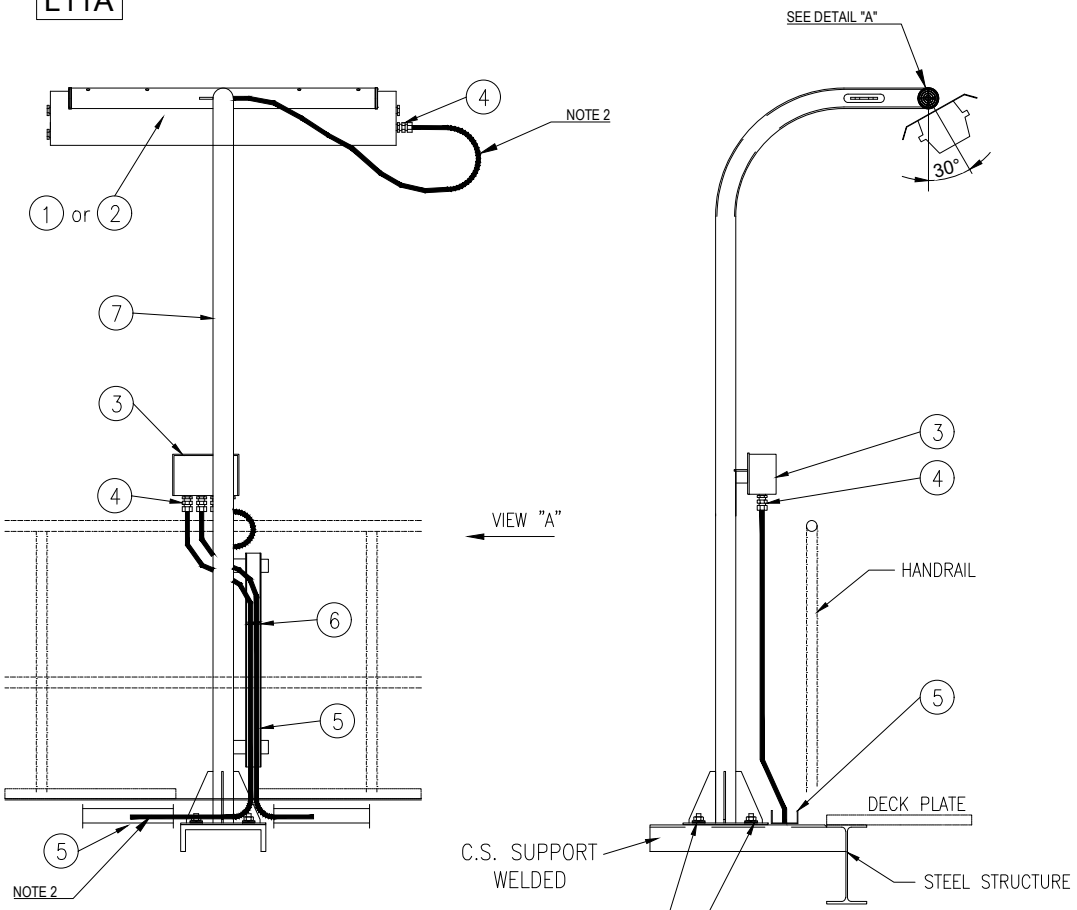
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

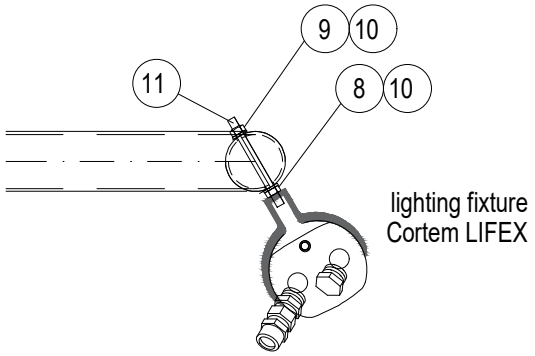
File Name : 123A90-DDL-EL-DG-20125

L11A



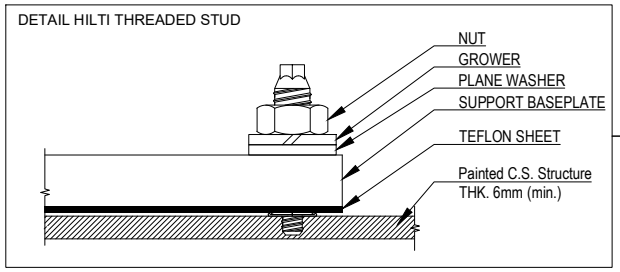
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

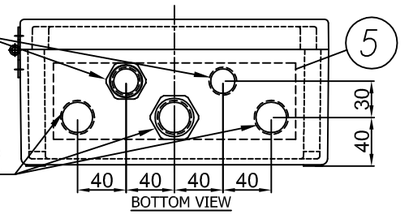
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

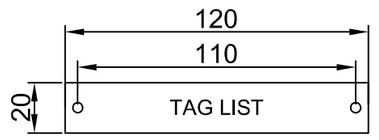
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

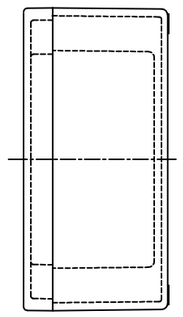
A002MAX

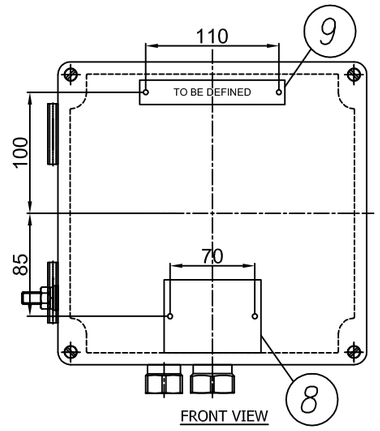
(9) PLATE DETAIL



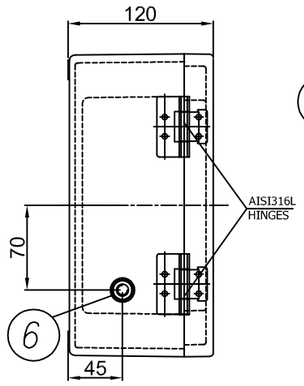
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

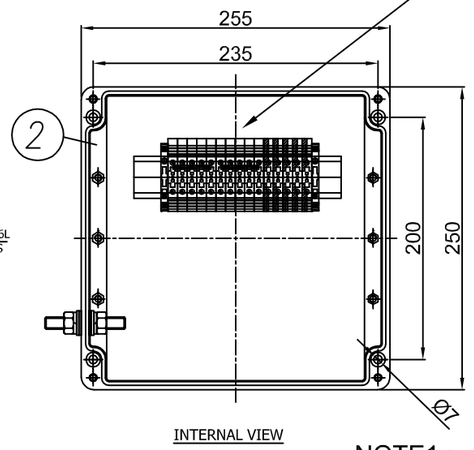

RIGHT VIEW



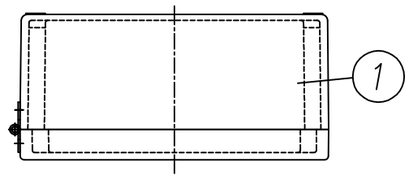
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

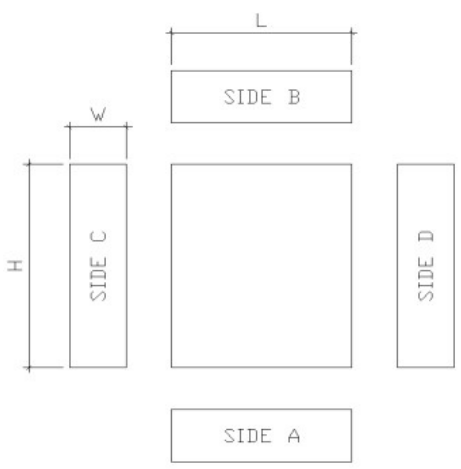
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

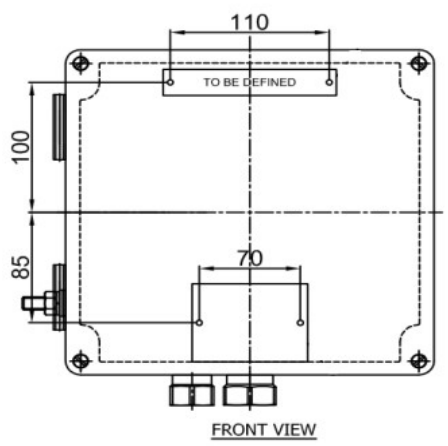
File Name : 1724001481-EL-DA-00003 Rev. 01

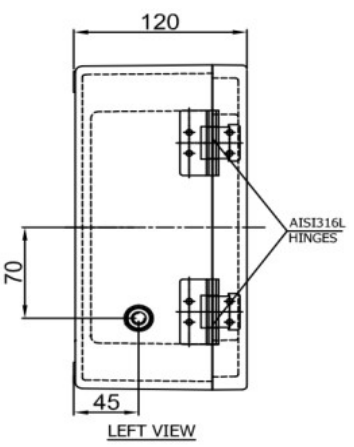
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

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explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Fiditas Ltd. Karlovačka cesta 197, 10250 Zagreb-Lučko, Croatia
Phone: +385 1 5578565; info@fiditas.com ; www.fiditas.com

[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx FIDI 21.0015X**	Page 1 of 4	Certificate history: Issue 0 (2022-02-18)
Status:	**Current**	Issue No: 1	
Date of Issue:	2023-05-04		

Applicant: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Equipment: **Junction boxes, local control stations and local control panels**

Optional accessory: Model reference: AQ-***P / AQ-***AL / AR-***P / AR-***AL / AQ-***P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT / SB-*** / ST-*** / EFE-*** / EFXE-*** AL/ EFXE-***SB / EFXE-***ST / EFE-***-HT / EFXE-***AL-HT

Type of Protection: **Flameproof enclosure 'db'; Intrinsic safety 'ia/ib'; Increased safety 'eb'; Encapsulation 'mb', Protection by enclosure 'tb'**

Marking: **Ex ia IIC/IIB T6...T4 Ga**(2) or

Ex db eb ia/ib mb [(3)] IIC/IIB T6...T4 Gb(1) or

Ex eb IIC/IIB T6...T4 Gb(1) or

Ex tb IIIC T85°C...T135°C Db

(1) Others type of protection additional to Ex e/eb depending to the components actually mounted.

(2) In case of enclosures containing Ex e/Ex eb terminals and/or Ex ia Ga already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Approved for issue on behalf of the IECEx Certification Body: **Marino Kelava**

Position: **Certification Signatory**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Fiditas Ltd
Slavka Tomerlina 44
HR-10361 Zagreb-Sesvete
Croatia

Fiditas
explosion safety solutions

IECEx Certificate of Conformity

Certificate No.: **IECEx FIDI 21.0015X**

Date of issue: 2023-05-04 Issue No: 1

Manufacturer: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

HR/FIDI/ExTR21.0016/00 HR/FIDI/ExTR21.0016/01

Quality Assessment Report:

FR/INE/QAR08.0002/15

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Junction boxes, local control stations and local control panels series AQ-…..; AR-…..; SB…..; EFE-…..; EFXE-….. use certified enclosures of various sizes, manufactured by Technor Italsmea S.p.A., type: AQ-.... ; AR-....; SB-...; ST- …, certificate IECEx FIDI 21.0012U.

Enclosures coded …-HT are made in glass fiber reinforced polyester resin or in aluminum, and covered by IECEx component certificates: IECEx PTB 08.0003U, enclosure type: 26.****** and IECEx PTB 08.0003U, enclosure type: 25.******.

Enclosures may be equipped with certified Ex equipment or Ex components and Ex terminals listed in manufacturer's documentation. Certified Ex equipment or Ex components and Ex terminals must be used according to data available in related component or equipment certificates, in particular relevant temperature range, voltage and current limitations. The cable glands or plugs, with separate IECEx certificate, made in type of protection ‘eb’ and/or ‘tb’ with appropriate IP protection are mounted according to related manufacturer’s installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

For other description see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Enclosures marked with warning label: “WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS” must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to IEC 60079-14.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
New IECEx certified Ex products added in the Apparatus list according to list given in HR/FIDI/ ExTR 21.0016/01.

Annex:

IECEx FIDI 21.0015X Technor Equipment Annex1 issue1.pdf

Technical description (continued from original certificate)

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
	(5)	Material **SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C to +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP55, IP66 or IP67 depending on model

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

Models sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

Power dissipation – HT aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

Power dissipation – Aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series of enclosure. Exact values are given in manufacturer's documentation.

Warning labels:

WARNING – DO NOT OPEN WHEN ENERGIZED (*)
(*) Not mandatory for apparatus with protection type Ex ia Ga and Ex ib Gb.

WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

To be added when the enclosures or parts of them have a surface resistance more than 10^9 Ω or 10^{11} Ω according to IEC 60079-0 Clause 7.4.2 a), as applicable, and as per following cases:

- are equipped with transparent parts made of polycarbonate.
- for category II 2 G / EPL Gb Gas group IIC: are painted and the paint layer thickness is > 0.2mm.
- for category II 2 G / EPL Gb Gas group IIB: are painted and the paint layer thickness is > 2mm.
- for category II 2 D / EPL Db: are painted and the paint layer thickness is > 2mm.
- for category II 2 G / EPL Gb Gas group IIC: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 2000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 8000mm^2.
- for category II 2 G /EPL Gb Gas group IIB: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 10000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 40000mm^2.

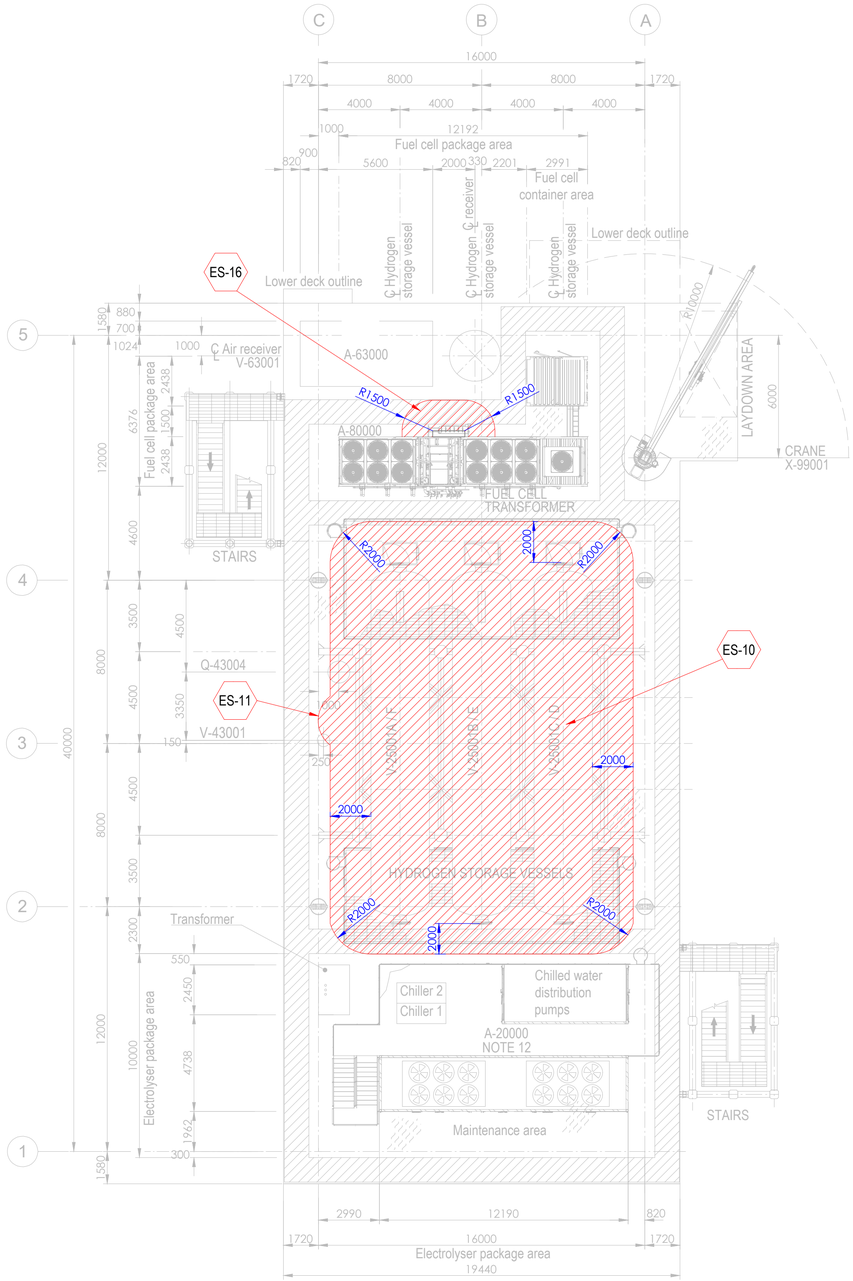
OPEN THE VALVE ONLY WHEN THE APPARATUS IS DE-ENERGIZED AND ONLY WHEN AN EXPLOSIVE DUST ATMOSPHERE IS NOT PRESENT
To be added on Ex tb apparatus equipped with the drain / venting device ECR3.

Other warnings depend on the components actually mounted, according to the component manufacturer's documentation.

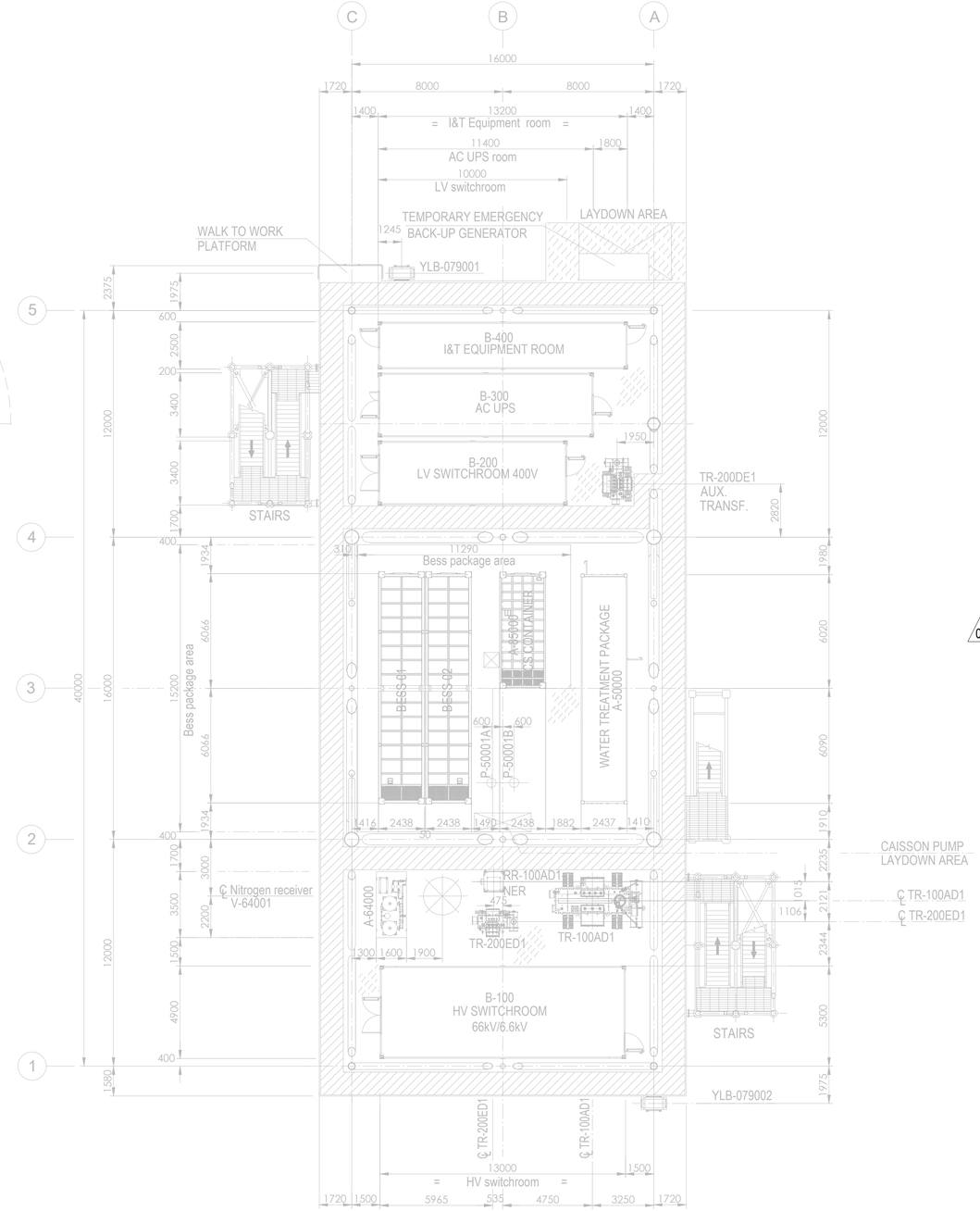
The tables below state the maximum power dissipation values (W) related to the internal temperature (Tint) and ambient temperature (Tamb).

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



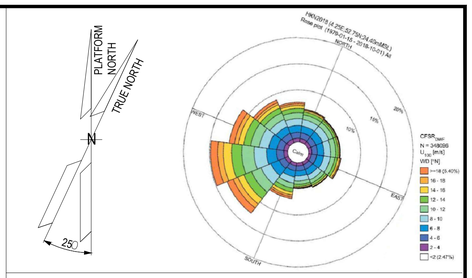
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

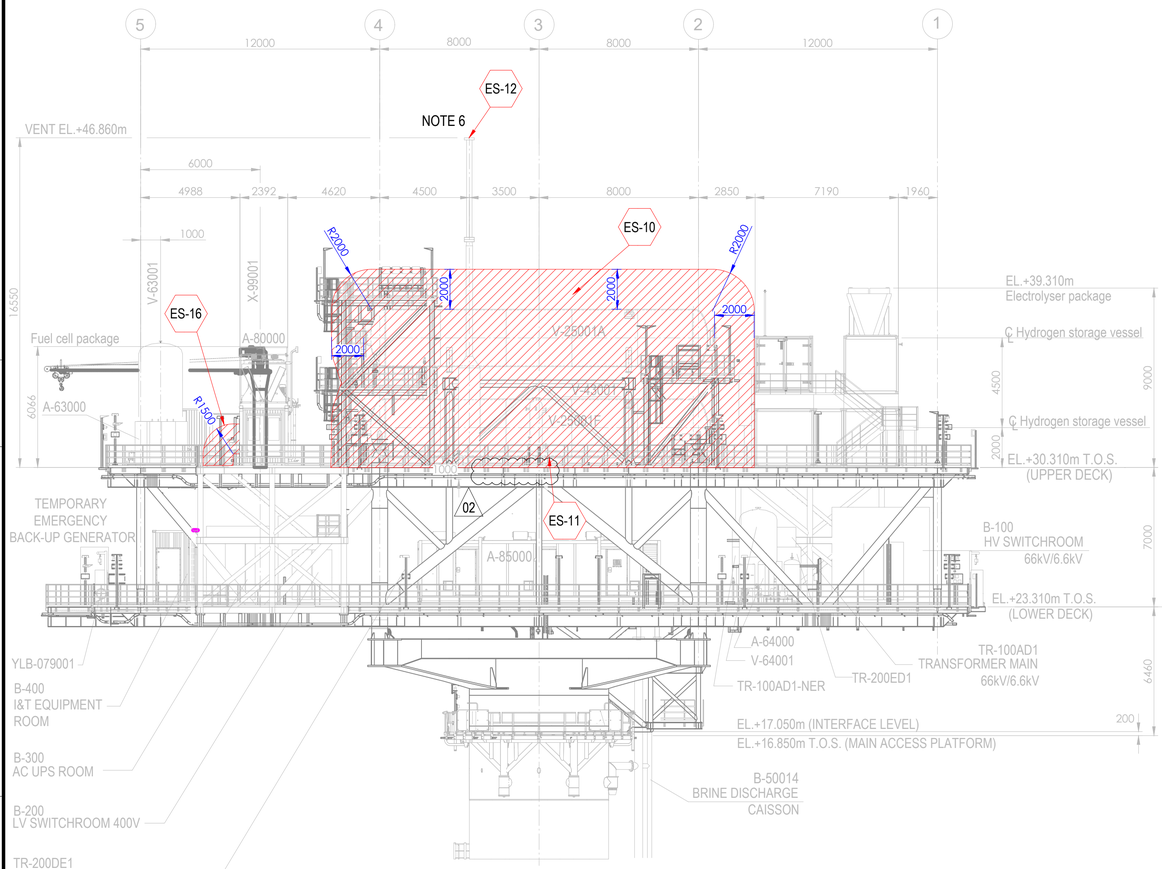
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

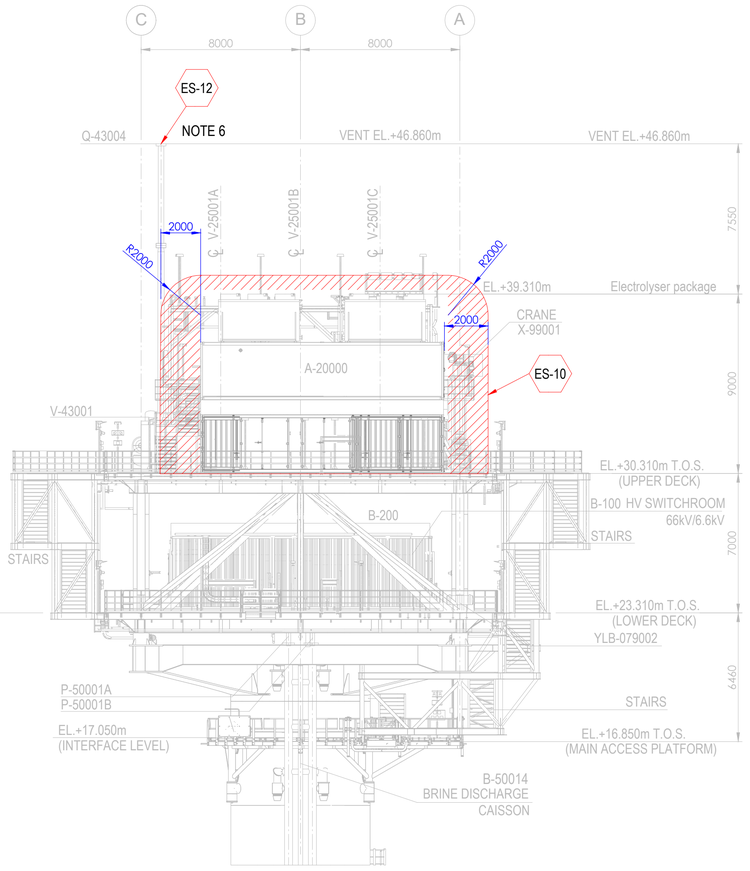
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

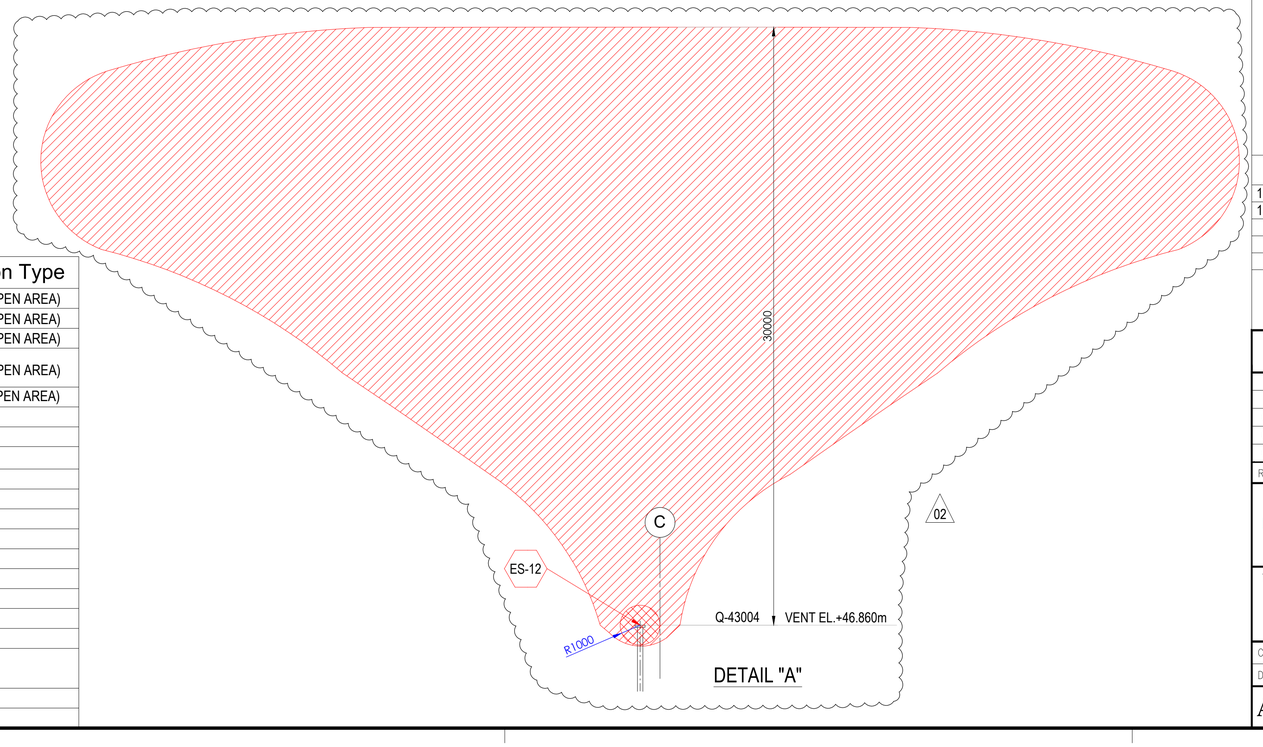


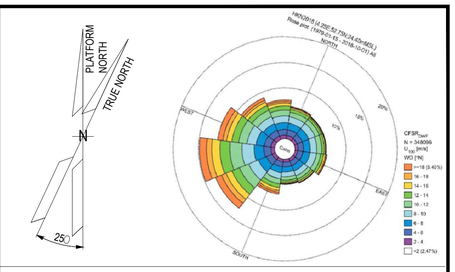
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-15	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001646	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24P00297990019				
Manufacturer	TECHNOR ITALSMEA			**Model**	AQ-252612P				
Cert No.	FIDI 21 ATEX 0090X-FIDI 21 0015 X			**Equipment Ambient Temp.**	-20 to + 40 °C				
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state "NA". Comments are required for 'Failure' column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex "e" – Ex "n" – Ex "t")	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-15	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001646		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	EJB-200N1-08-L1-15	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001646	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

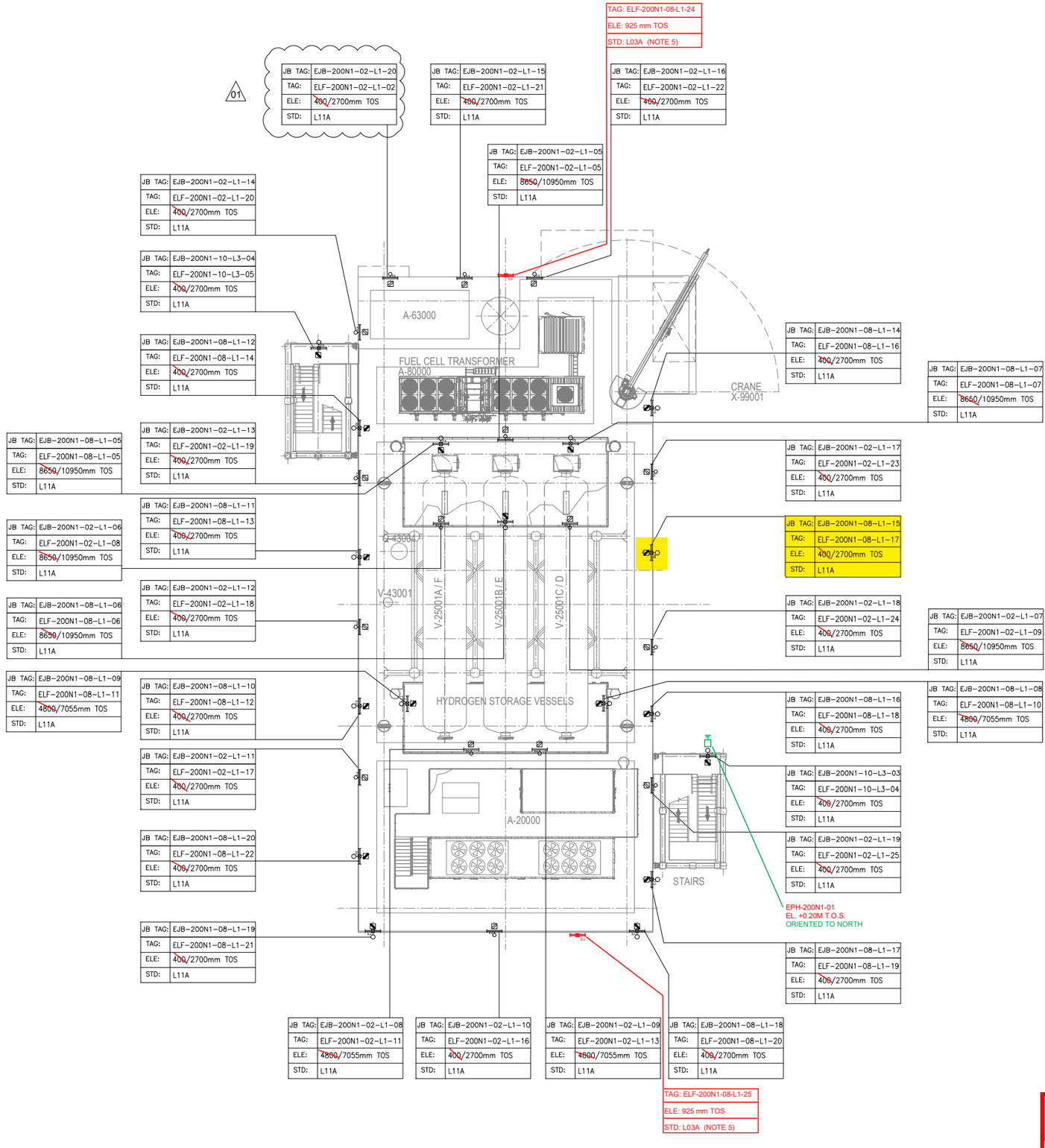
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

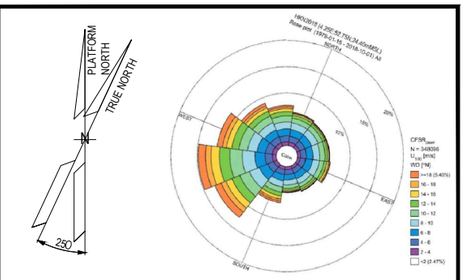
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:31:46.153Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-16T07:38:40.368Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

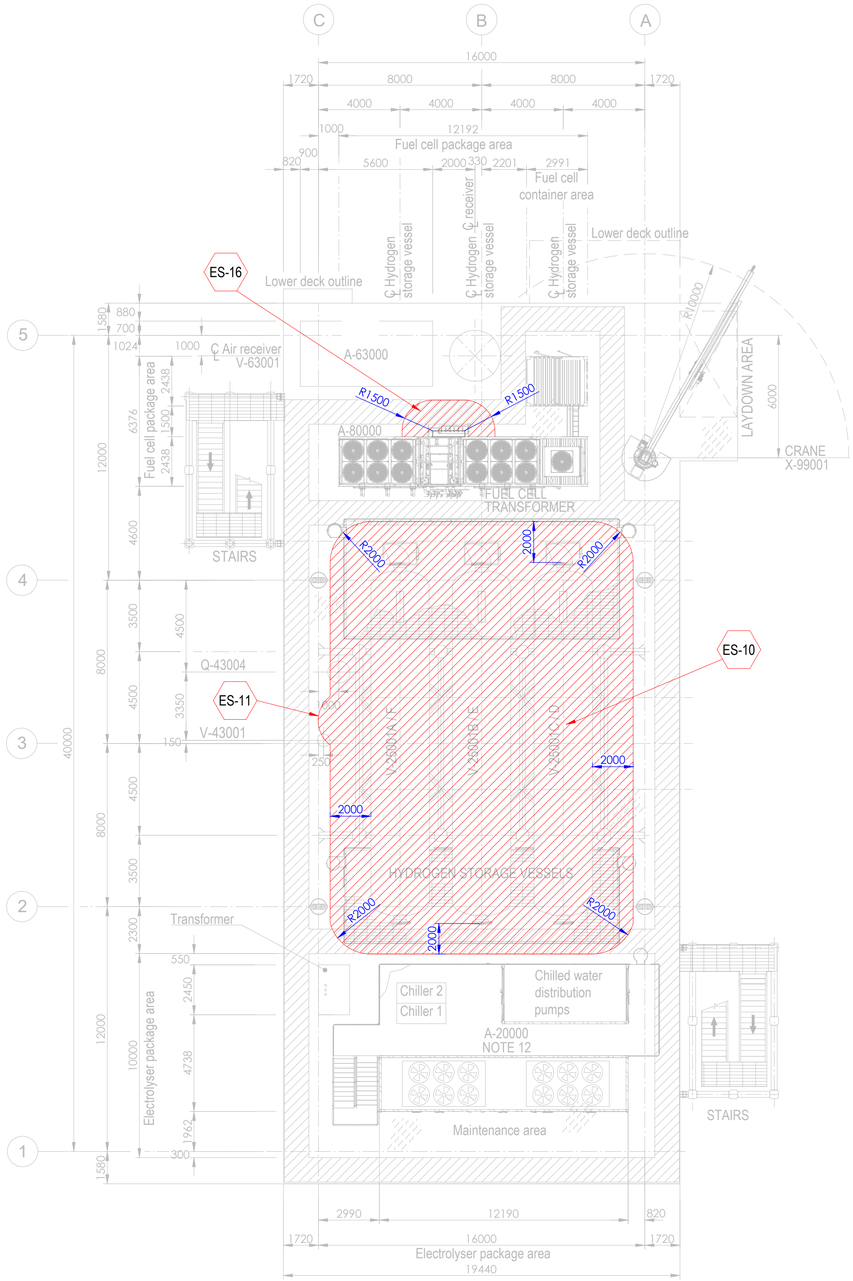
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

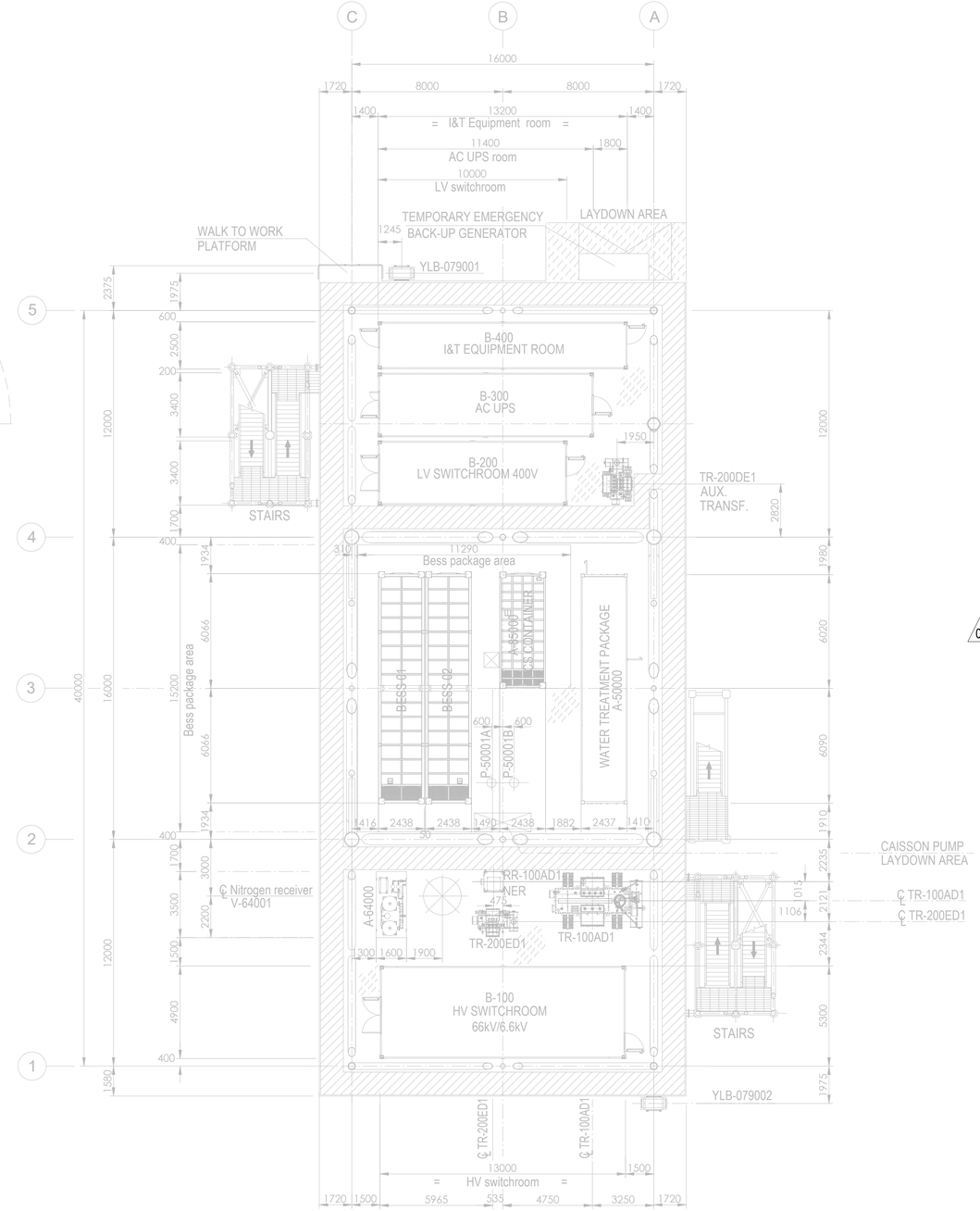
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



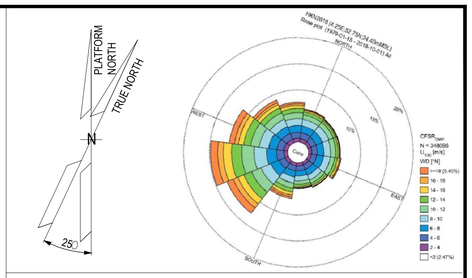
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

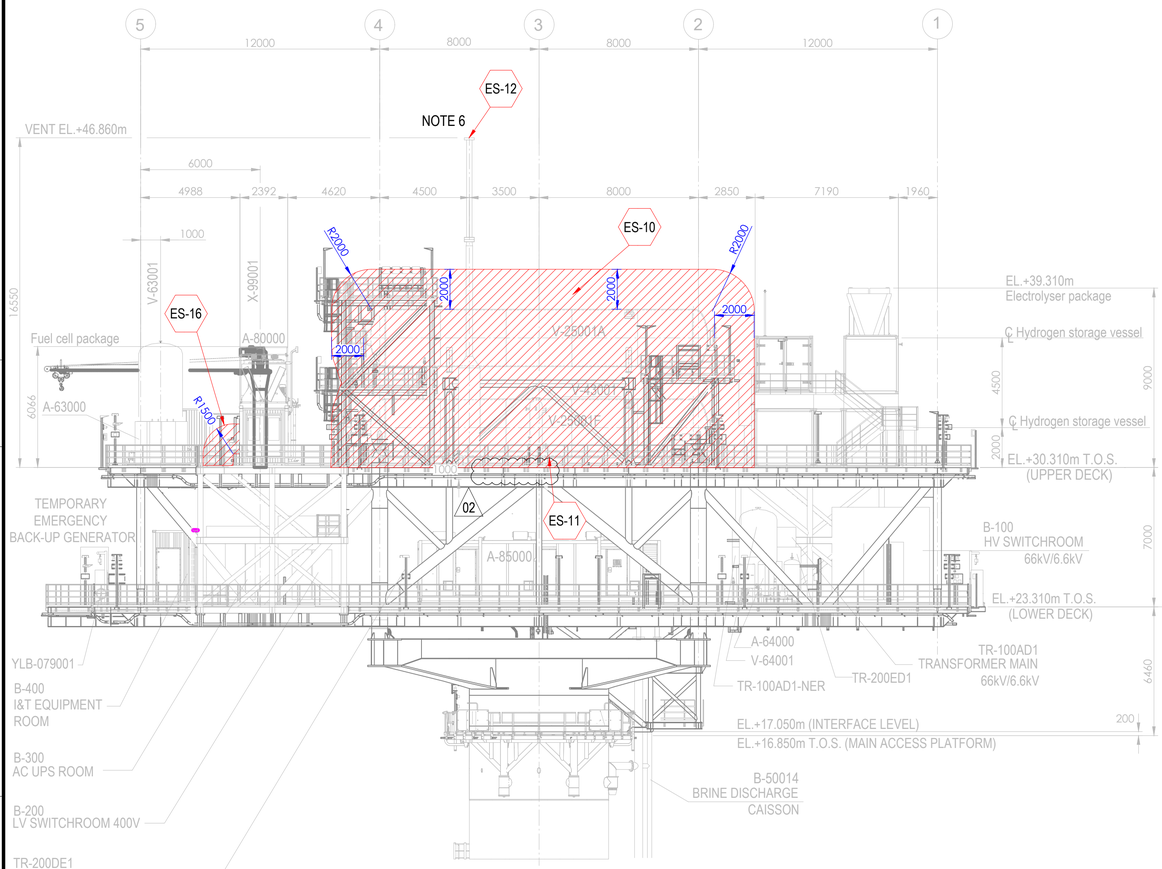
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

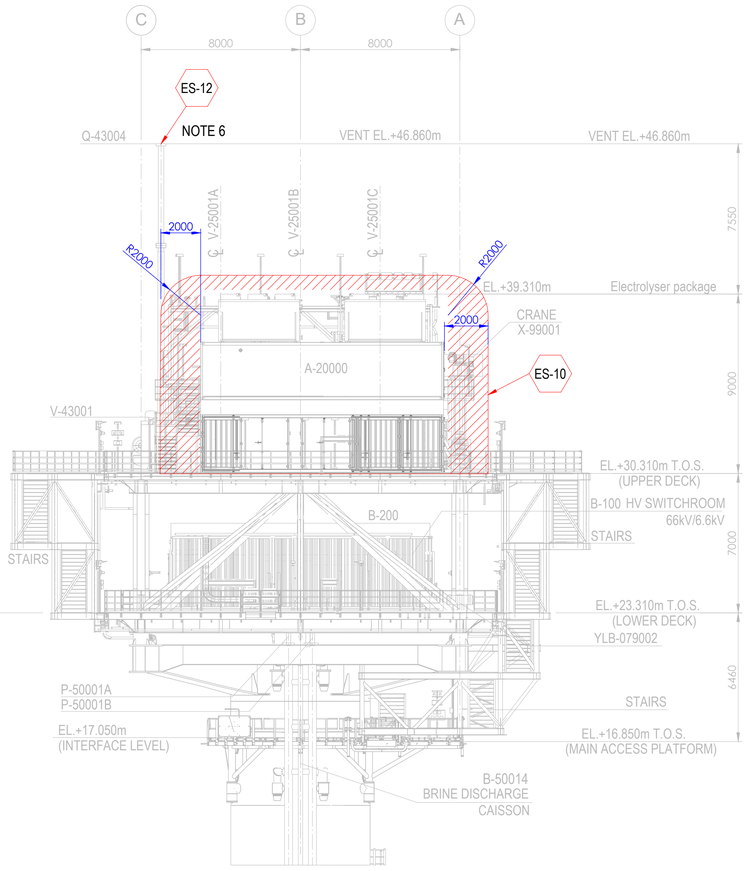
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

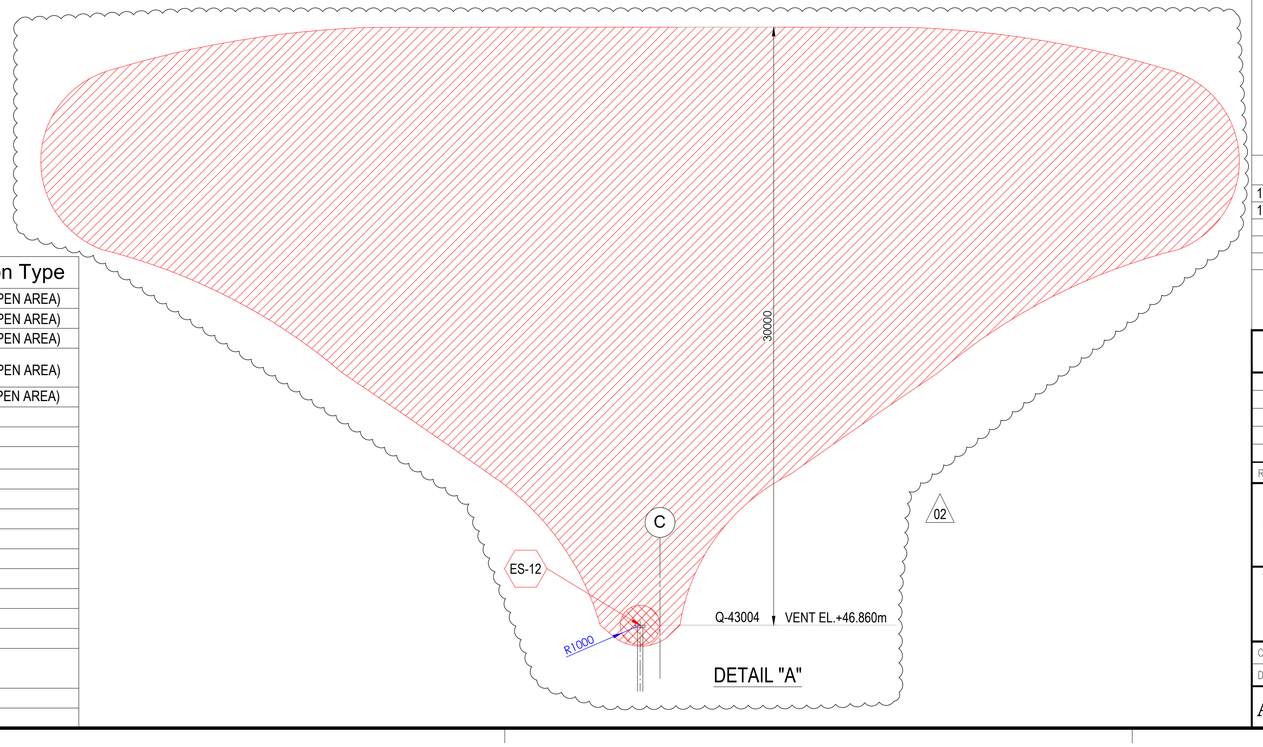


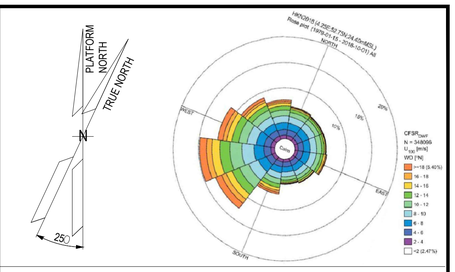
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

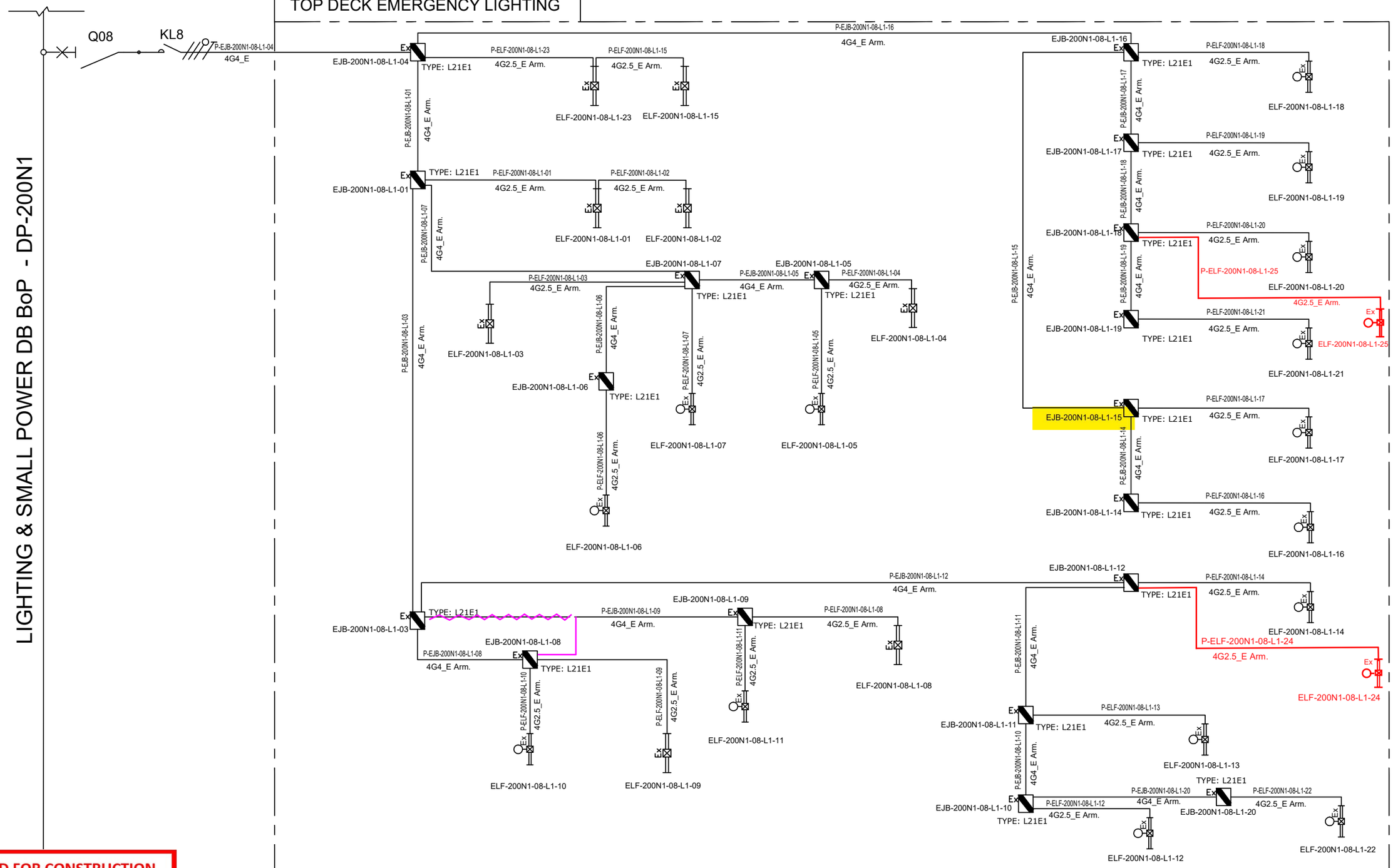
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DG–20125	011	01

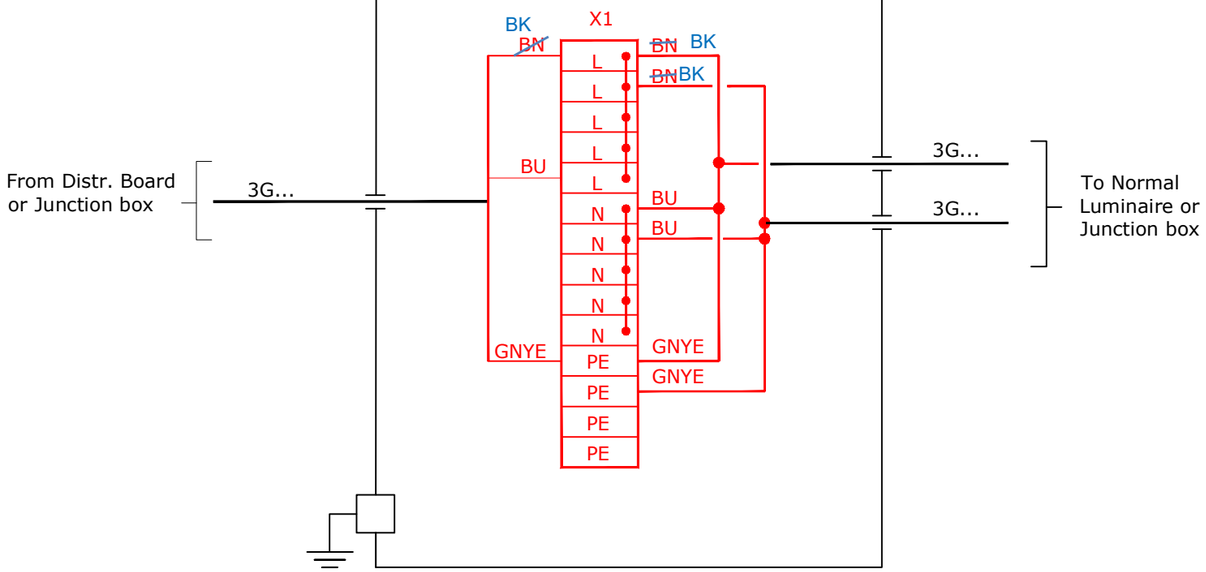
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

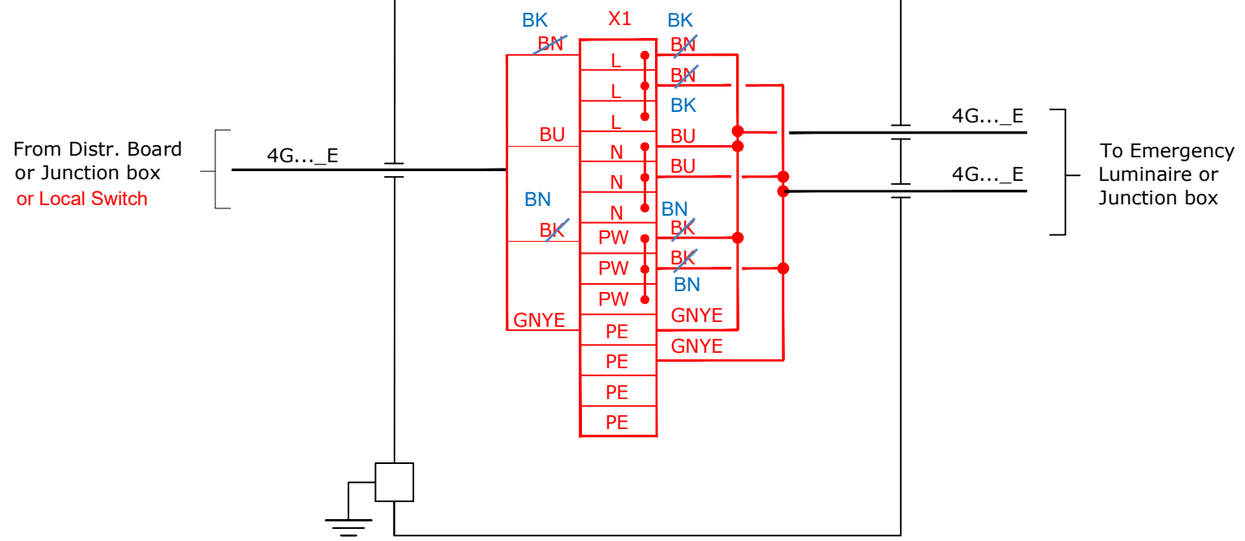
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

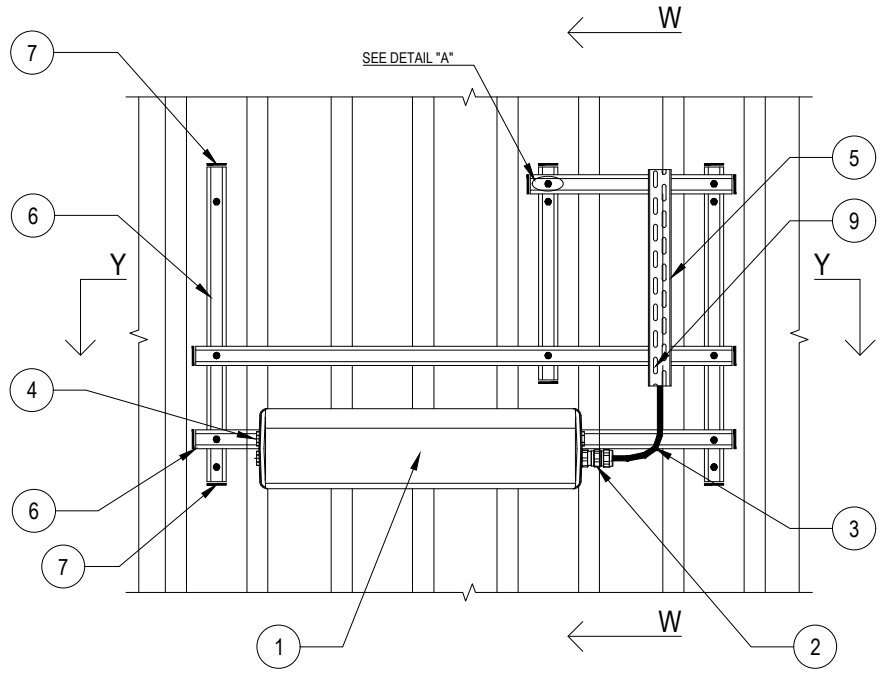
SHEET 016

REV. 01

File Name : 123A90-DDL-EL-DG-20125

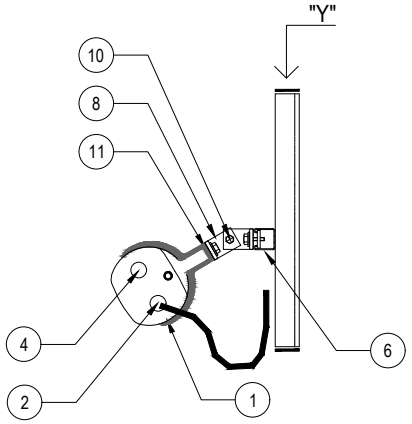
F.to UNI A3: 420mmx297mm

L10

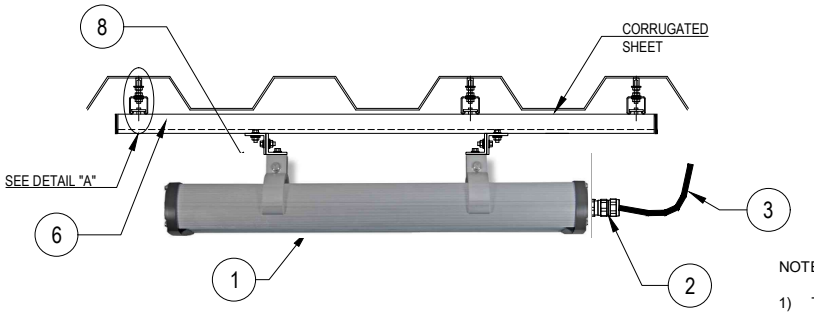


02

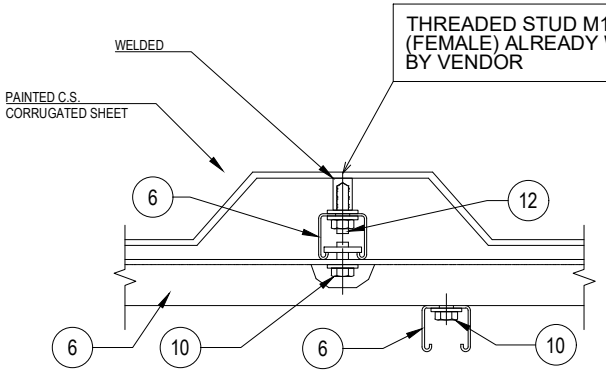
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		AS REQ.	NOTE 2 NOTE 4
3	ARMOURED/UNARMOURED CABLE				NOTE 4
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE TRAY	AISI 316L			
6	SINGLE U-CHANNEL PERFORATED ON NO.3 SIDE	AISI 316L	41x41x2		NOTE 1
7	PLUG FOR U-CHANNEL	LPDE		AS REQ.	
8	ANGLE PLATE FOR ORTOGONAL-TRASV. CONNECTION WITH NO. 2 HOLES FOR UNISTRUT PROFILE 41x41x2X2	AISI 316L		4	
9	DOUBLE SLOT CROWNED HEAD SCREW WITH NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x20		
10	HEX. BOLT WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10x30	4	
11	HEX. BOLT WITH PLANE WASHER	AISI 316L	M8x16	2	
12	THREADED ROD COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



SECTION "W-W"



SECTION "Y-Y"



DETAIL "A"

NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON WALL WITH U-CHANNEL

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

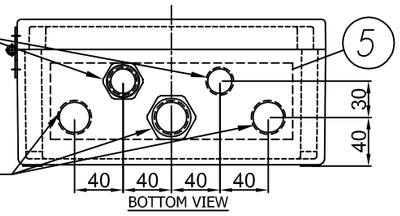
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 012 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

10 4 N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

3 3 N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

8 I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

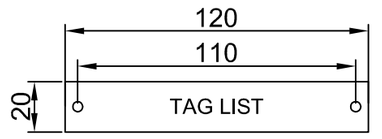
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

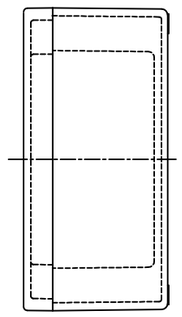
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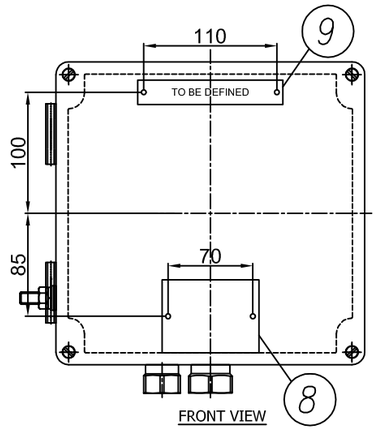
9 PLATE DETAIL



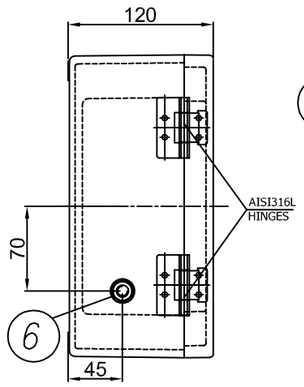
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

7 Terminals numbered: NOTE 1

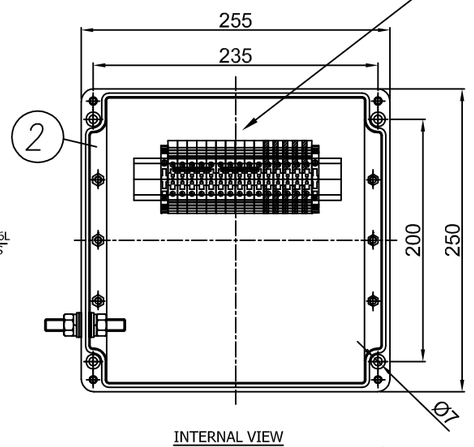

RIGHT VIEW



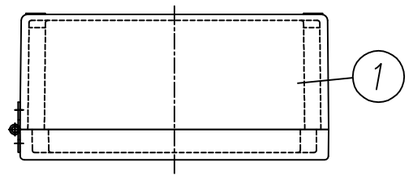
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481–EL–DA–00003

SHEET 004

REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

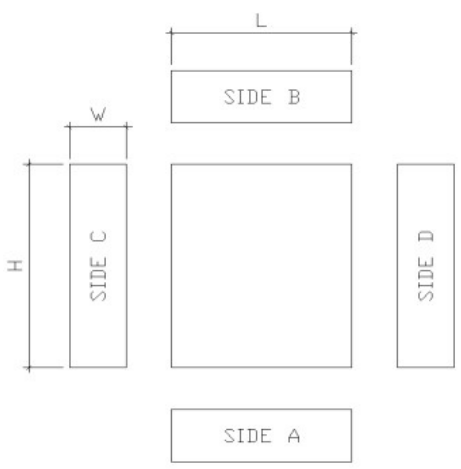
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

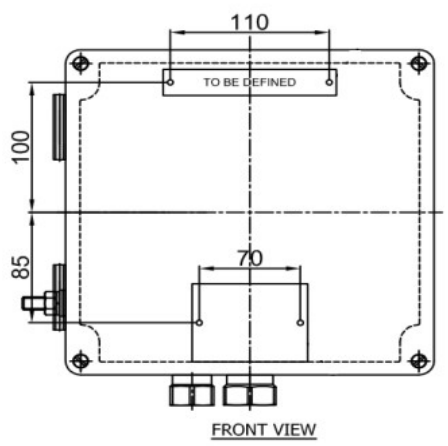
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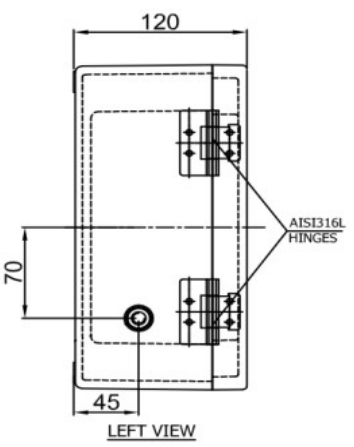
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

Fiditas
explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

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ITEM	Tag	EJB-200N1-08-L1-16	: JB - EMERGENCY LIGHTING	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001647	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK	Discipline: ATEX	Form: CJX01 — Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24P00297990018				
Manufacturer	TECHNOR ITALSMEA			**Model**	AQ-252612P				
Cert No.	FIDI 21 ATEX 0090X-FIDI 21 0015 X			**Equipment Ambient Temp.**	-20 to + 40 °C				
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state "NA". Comments are required for 'Failure' column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex "e" – Ex "n" – Ex "t")	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-16	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001647		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-16	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001647	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

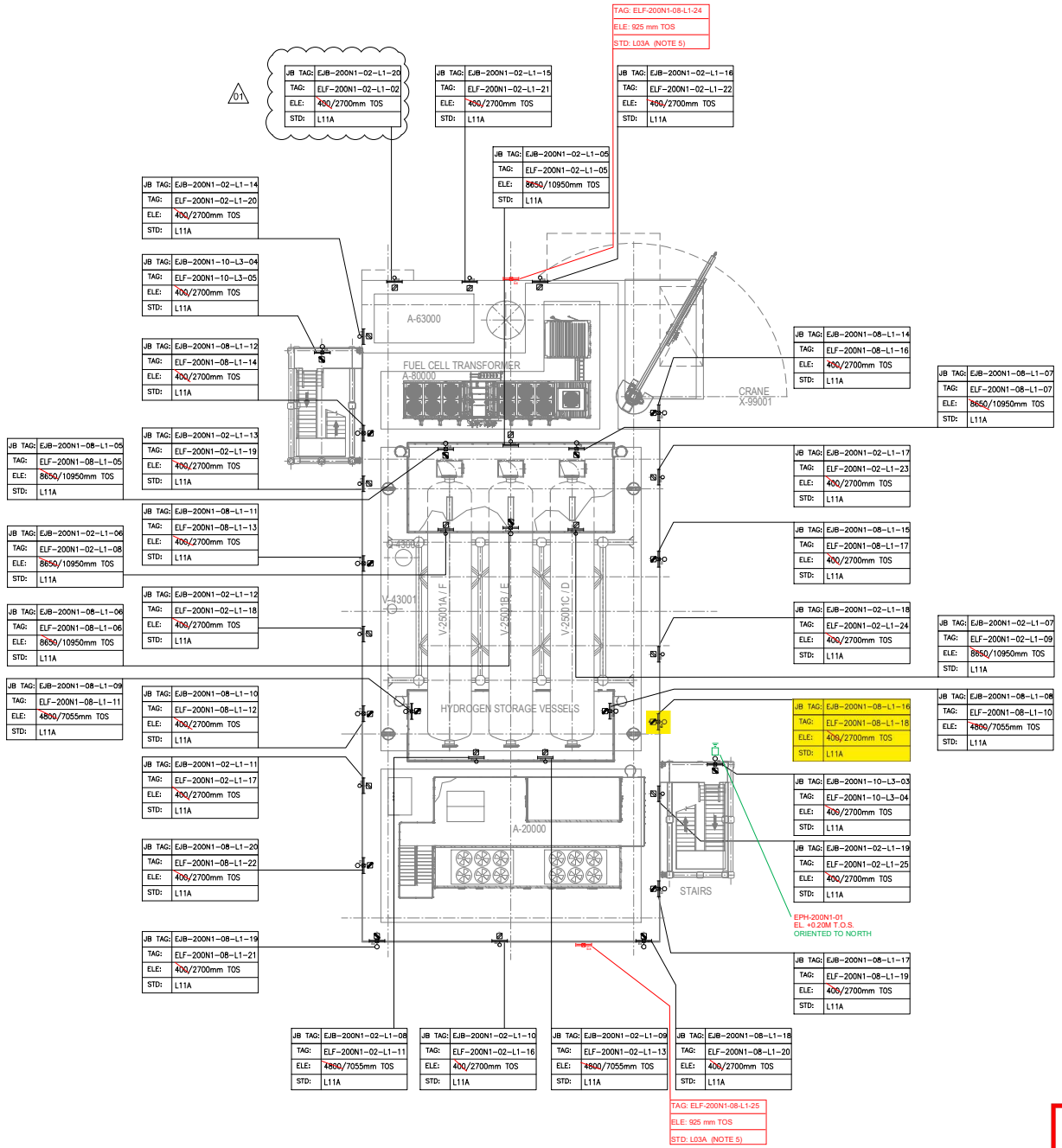
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

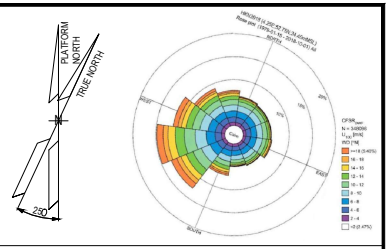
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-13	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:02:02.573Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-16T07:19:43.644Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

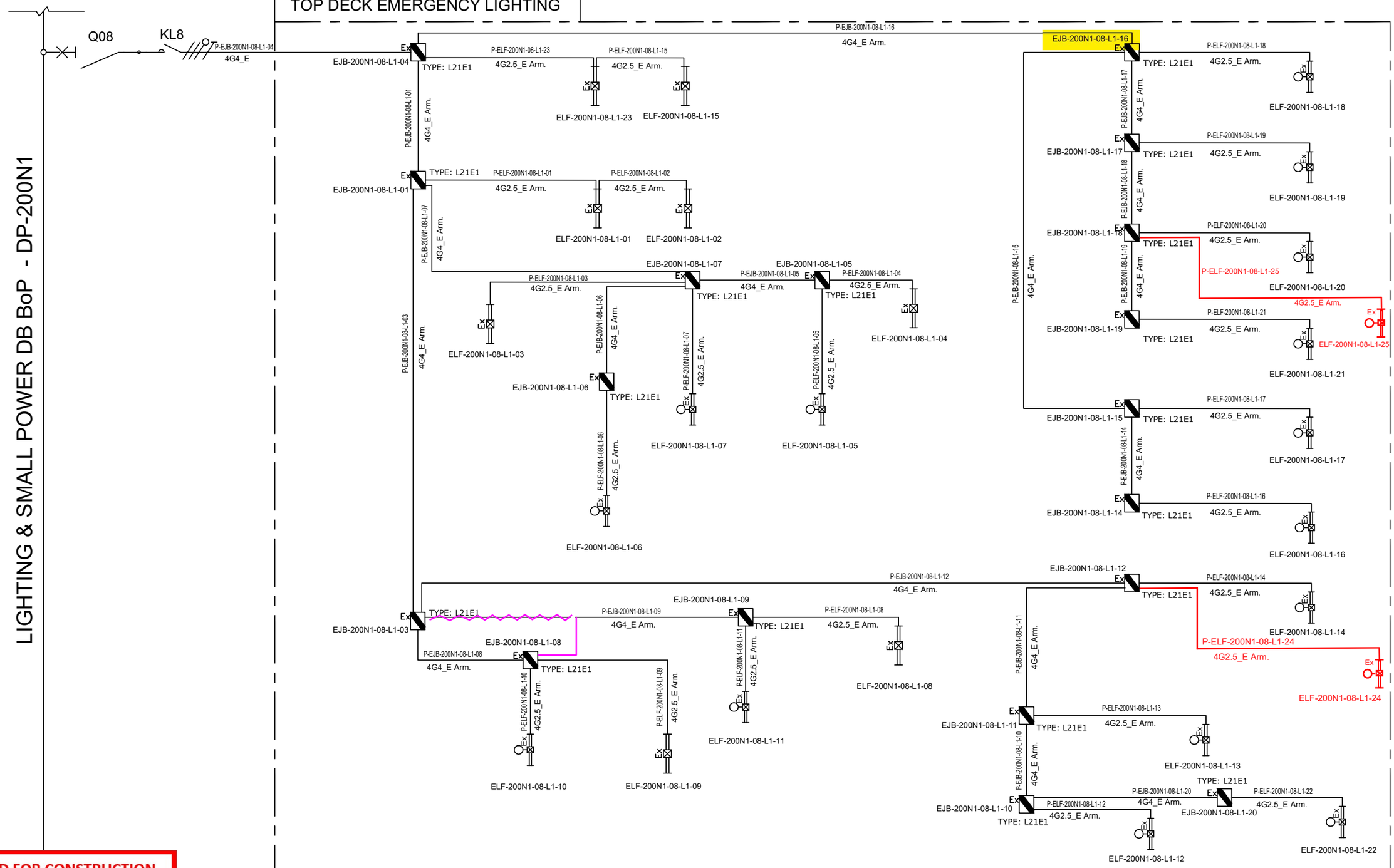
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

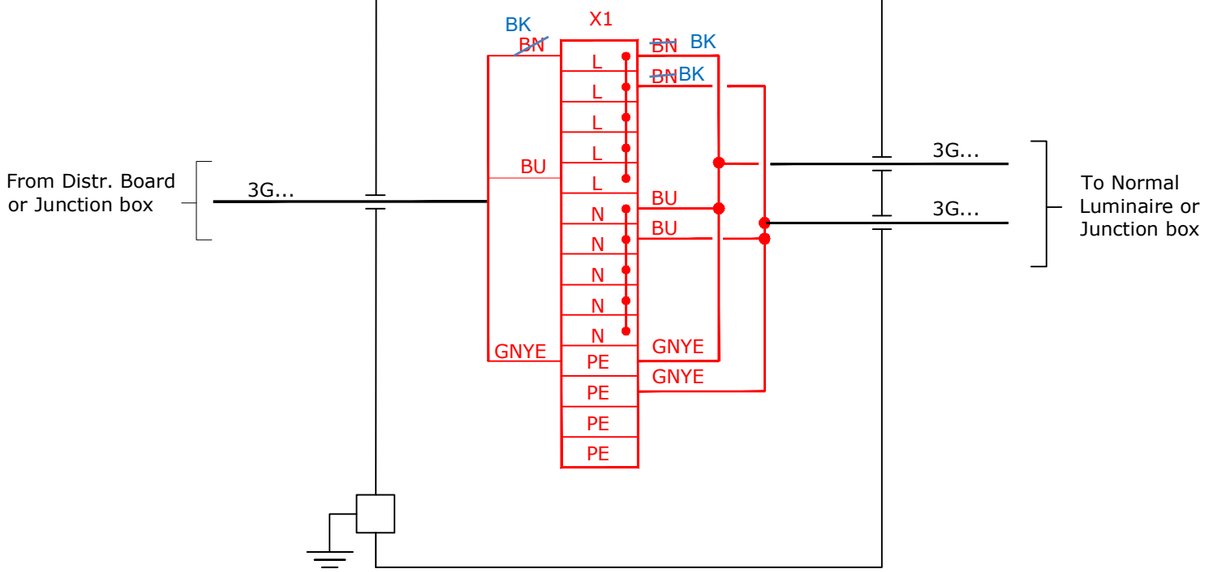
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

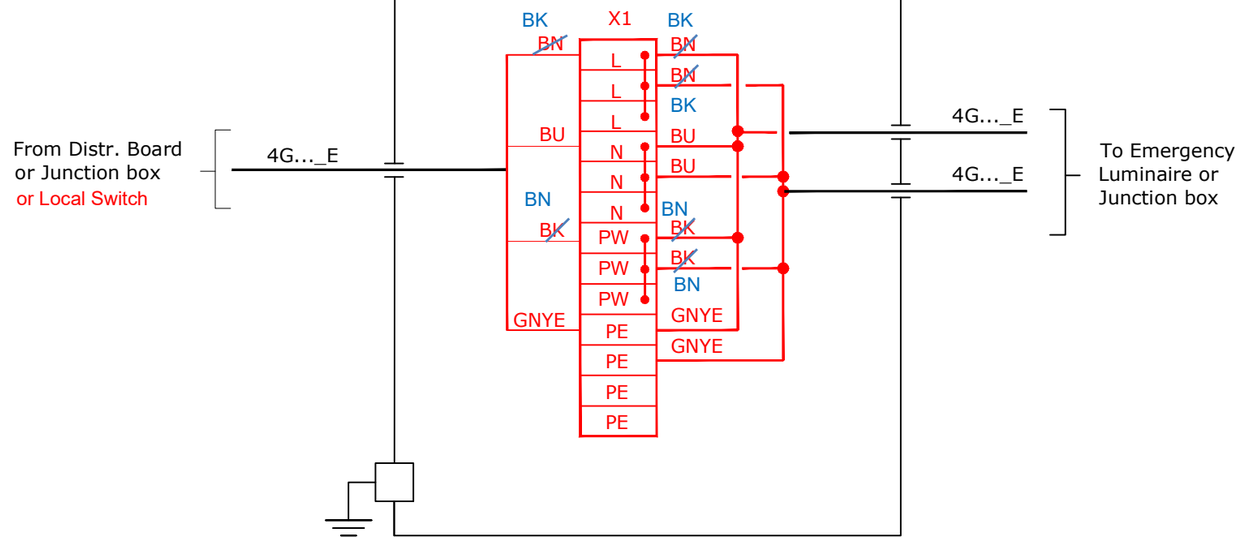
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

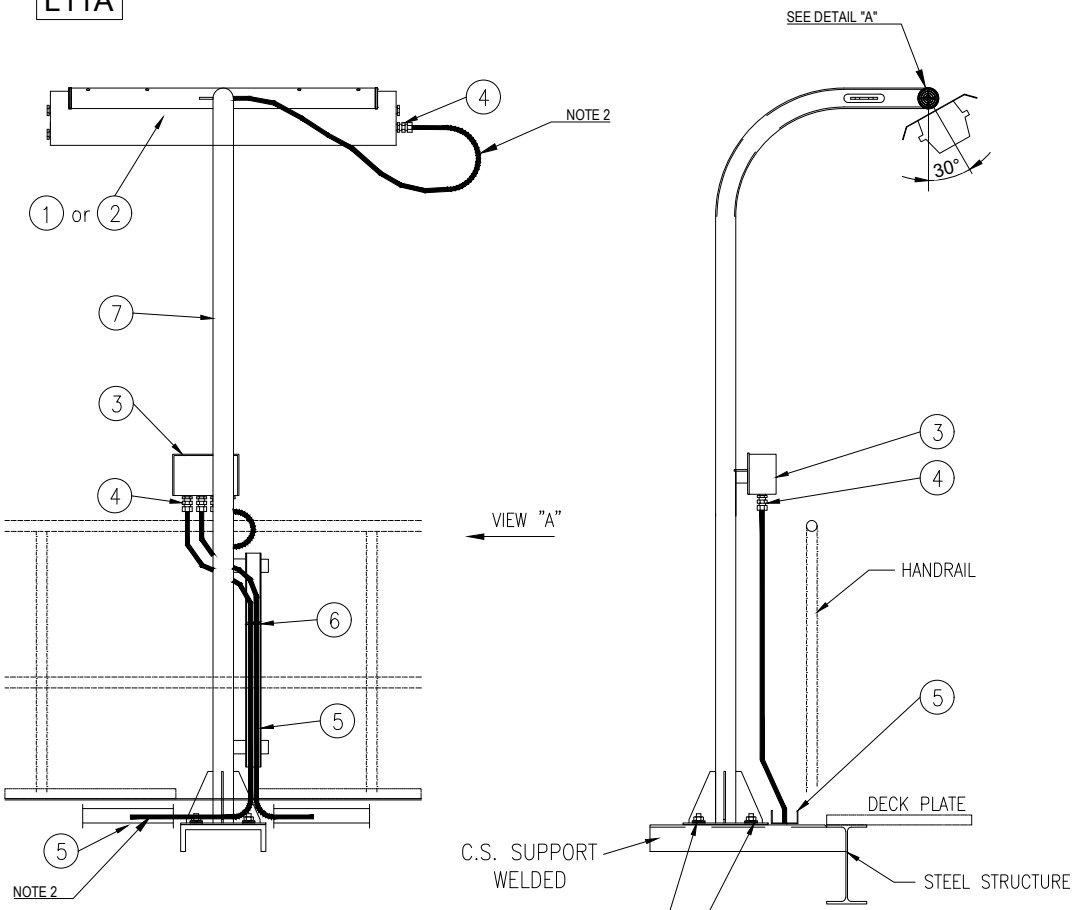
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

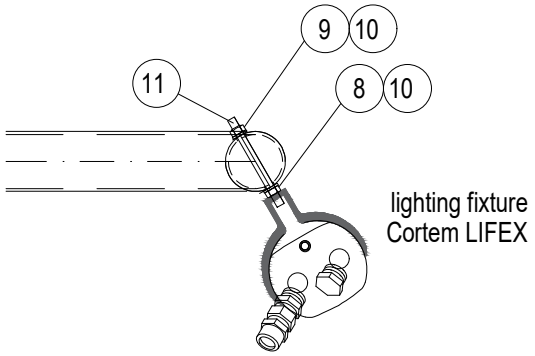
File Name : 123A90-DDL-EL-DG-20125

L11A



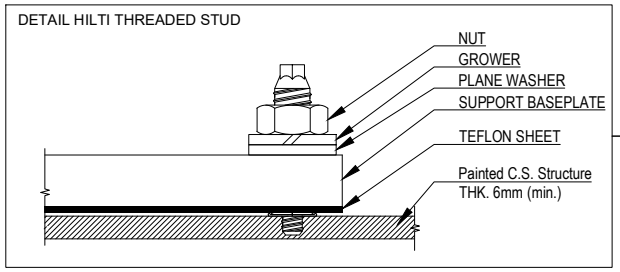
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

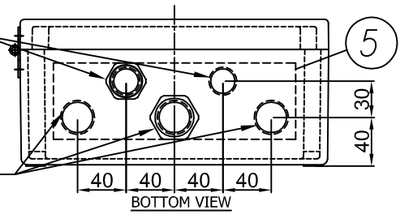
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

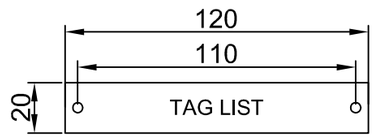
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

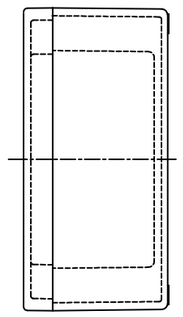
A002MAX

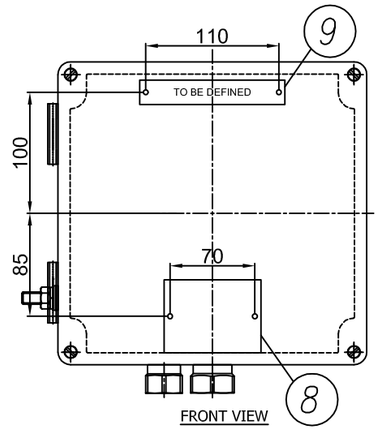
(9) PLATE DETAIL



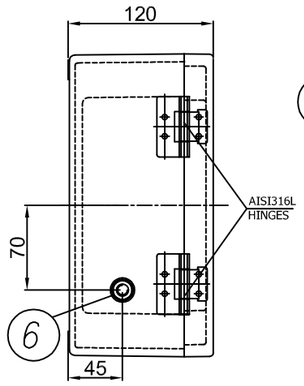
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

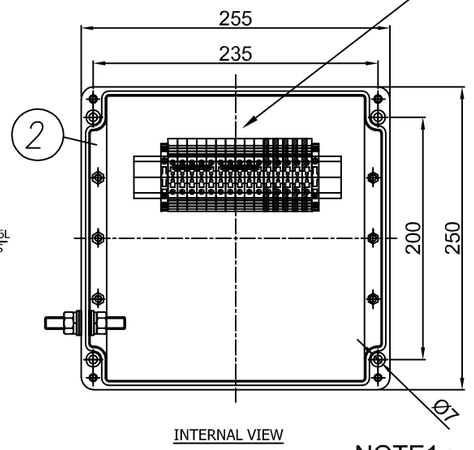

RIGHT VIEW



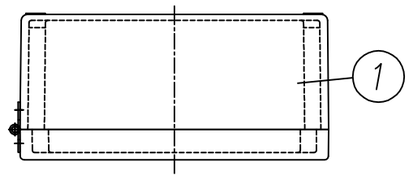
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

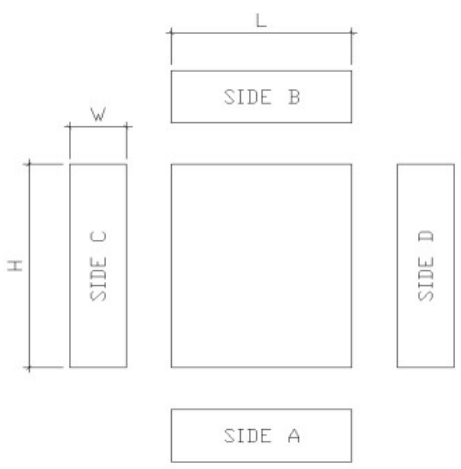
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

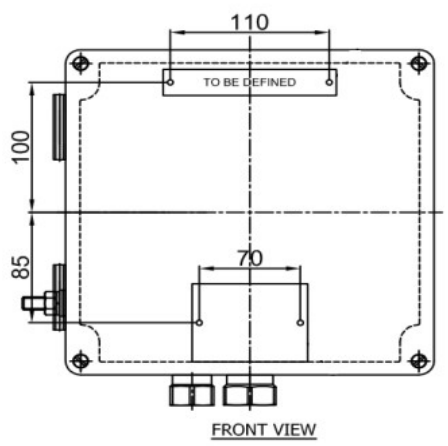
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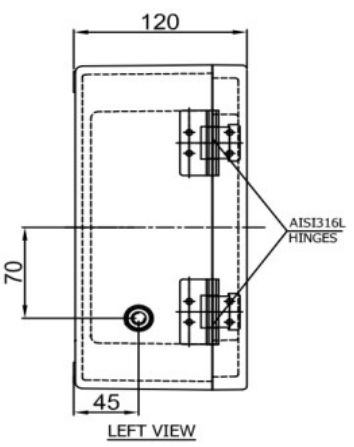
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
EJB-200N1-08-L1-07	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990079	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-08	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990081	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-09	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990080	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-10	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990075	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-11	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990074	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-12	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990073	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-14	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990071	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-15	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990070	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-16	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990069	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-17	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990068	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-18	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990067	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-19	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990066	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-20	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990076	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-01	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990016	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-02	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990019	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-04	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990017	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-05	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990030	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-06	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990029	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-07	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990028	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-08	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990027	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-09	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990026	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-10	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990025	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-11	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990024	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-12	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990023	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-13	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990022	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-14	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990021	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-15	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990020	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-16	Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990031	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-09-L2-17	Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990015	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-01	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990040	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-02	Stair Emergency Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990039	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-03	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990041	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-04	Stair Emergency Lighting JB	LOWER & UPPER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990042	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-05	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990034	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-06	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990035	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-07	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990036	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-08	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990037	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-10-L3-09	Stair Emergency Lighting JB	BELOW LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990038	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-02	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_1
ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_6
ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_2 HAZARDOUS-AREA_5 HAZARDOUS-AREA_4
ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

Fiditas
explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Fiditas Ltd. Karlovačka cesta 197, 10250 Zagreb-Lučko, Croatia
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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx FIDI 21.0015X**	Page 1 of 4	Certificate history: Issue 0 (2022-02-18)
Status:	**Current**	Issue No: 1	
Date of Issue:	2023-05-04		

Applicant: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Equipment: **Junction boxes, local control stations and local control panels**

Optional accessory: Model reference: AQ-***P / AQ-***AL / AR-***P / AR-***AL / AQ-***P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT / SB-*** / ST-*** / EFE-*** / EFXE-*** AL/ EFXE-***SB / EFXE-***ST / EFE-***-HT / EFXE-***AL-HT

Type of Protection: **Flameproof enclosure 'db'; Intrinsic safety 'ia/ib'; Increased safety 'eb'; Encapsulation 'mb', Protection by enclosure 'tb'**

Marking: **Ex ia IIC/IIB T6...T4 Ga**(2) or

Ex db eb ia/ib mb [(3)] IIC/IIB T6...T4 Gb(1) or

Ex eb IIC/IIB T6...T4 Gb(1) or

Ex tb IIIC T85°C...T135°C Db

(1) Others type of protection additional to Ex e/eb depending to the components actually mounted.

(2) In case of enclosures containing Ex e/Ex eb terminals and/or Ex ia Ga already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Approved for issue on behalf of the IECEx Certification Body: **Marino Kelava**

Position: **Certification Signatory**

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

Fiditas Ltd
Slavka Tomerlina 44
HR-10361 Zagreb-Sesvete
Croatia

Fiditas
explosion safety solutions

IECEx Certificate of Conformity

Certificate No.: **IECEx FIDI 21.0015X**

Date of issue: 2023-05-04 Issue No: 1

Manufacturer: **Technor Italsmea S.p.A.**
Via Italia 33
20060 Gessate (MI)
Italy

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

HR/FIDI/ExTR21.0016/00 HR/FIDI/ExTR21.0016/01

Quality Assessment Report:

FR/INE/QAR08.0002/15

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Junction boxes, local control stations and local control panels series AQ-…..; AR-…..; SB…..; EFE-…..; EFXE-….. use certified enclosures of various sizes, manufactured by Technor Italsmea S.p.A., type: AQ-.... ; AR-....; SB-...; ST- …, certificate IECEx FIDI 21.0012U.

Enclosures coded …-HT are made in glass fiber reinforced polyester resin or in aluminum, and covered by IECEx component certificates: IECEx PTB 08.0003U, enclosure type: 26.****** and IECEx PTB 08.0003U, enclosure type: 25.******.

Enclosures may be equipped with certified Ex equipment or Ex components and Ex terminals listed in manufacturer's documentation. Certified Ex equipment or Ex components and Ex terminals must be used according to data available in related component or equipment certificates, in particular relevant temperature range, voltage and current limitations. The cable glands or plugs, with separate IECEx certificate, made in type of protection ‘eb’ and/or ‘tb’ with appropriate IP protection are mounted according to related manufacturer’s installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

For other description see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Enclosures marked with warning label: “WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS” must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to IEC 60079-14.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
New IECEx certified Ex products added in the Apparatus list according to list given in HR/FIDI/ ExTR 21.0016/01.

Annex:

IECEx FIDI 21.0015X Technor Equipment Annex1 issue1.pdf

Technical description (continued from original certificate)

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
	(5)	Material **SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C to +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP55, IP66 or IP67 depending on model

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

Models sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

Power dissipation – HT aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

Power dissipation – Aluminium alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series of enclosure. Exact values are given in manufacturer's documentation.

Warning labels:

WARNING – DO NOT OPEN WHEN ENERGIZED (*)
(*) Not mandatory for apparatus with protection type Ex ia Ga and Ex ib Gb.

WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

To be added when the enclosures or parts of them have a surface resistance more than 10^9 Ω or 10^{11} Ω according to IEC 60079-0 Clause 7.4.2 a), as applicable, and as per following cases:

- are equipped with transparent parts made of polycarbonate.
- for category II 2 G / EPL Gb Gas group IIC: are painted and the paint layer thickness is > 0.2mm.
- for category II 2 G / EPL Gb Gas group IIB: are painted and the paint layer thickness is > 2mm.
- for category II 2 D / EPL Db: are painted and the paint layer thickness is > 2mm.
- for category II 2 G / EPL Gb Gas group IIC: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 2000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 8000mm^2.
- for category II 2 G /EPL Gb Gas group IIB: not conductive individual materials (labels), applied on painted enclosures, have exposed (chargeable area) > 10000mm^2 or, not conductive individual materials (labels), applied on unpainted (conductive earthed surface) enclosures, have exposed (chargeable area) > 40000mm^2.

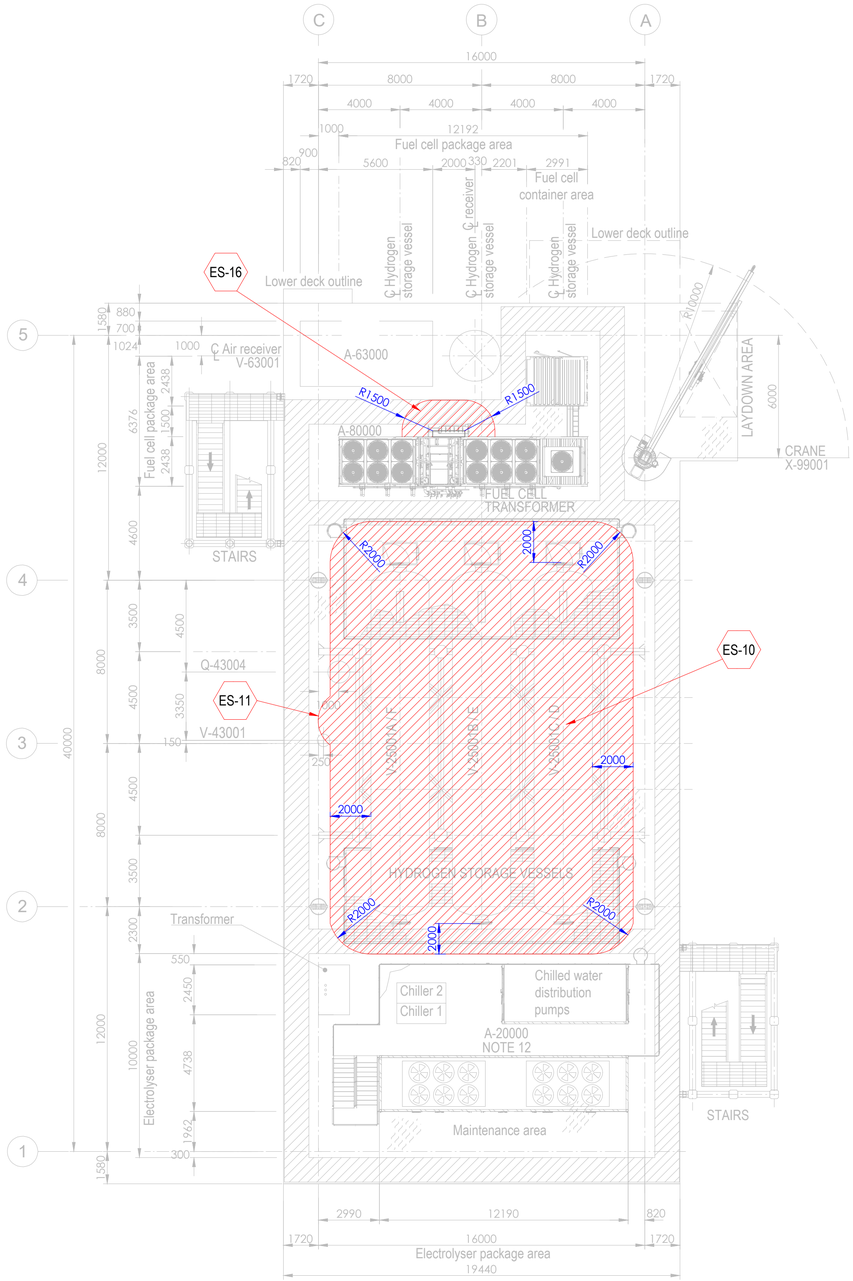
OPEN THE VALVE ONLY WHEN THE APPARATUS IS DE-ENERGIZED AND ONLY WHEN AN EXPLOSIVE DUST ATMOSPHERE IS NOT PRESENT
To be added on Ex tb apparatus equipped with the drain / venting device ECR3.

Other warnings depend on the components actually mounted, according to the component manufacturer's documentation.

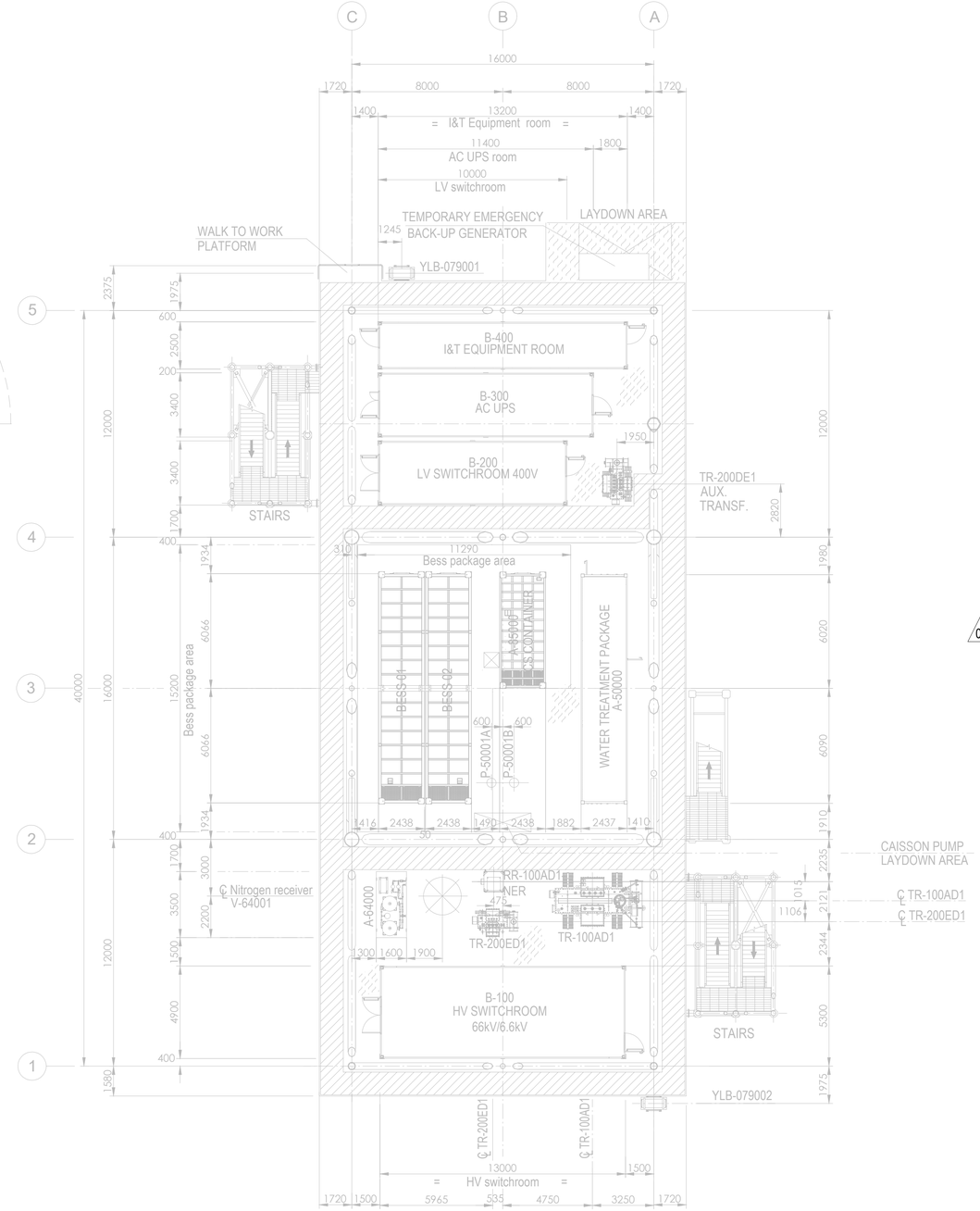
The tables below state the maximum power dissipation values (W) related to the internal temperature (Tint) and ambient temperature (Tamb).

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



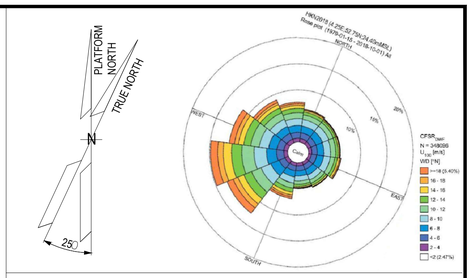
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

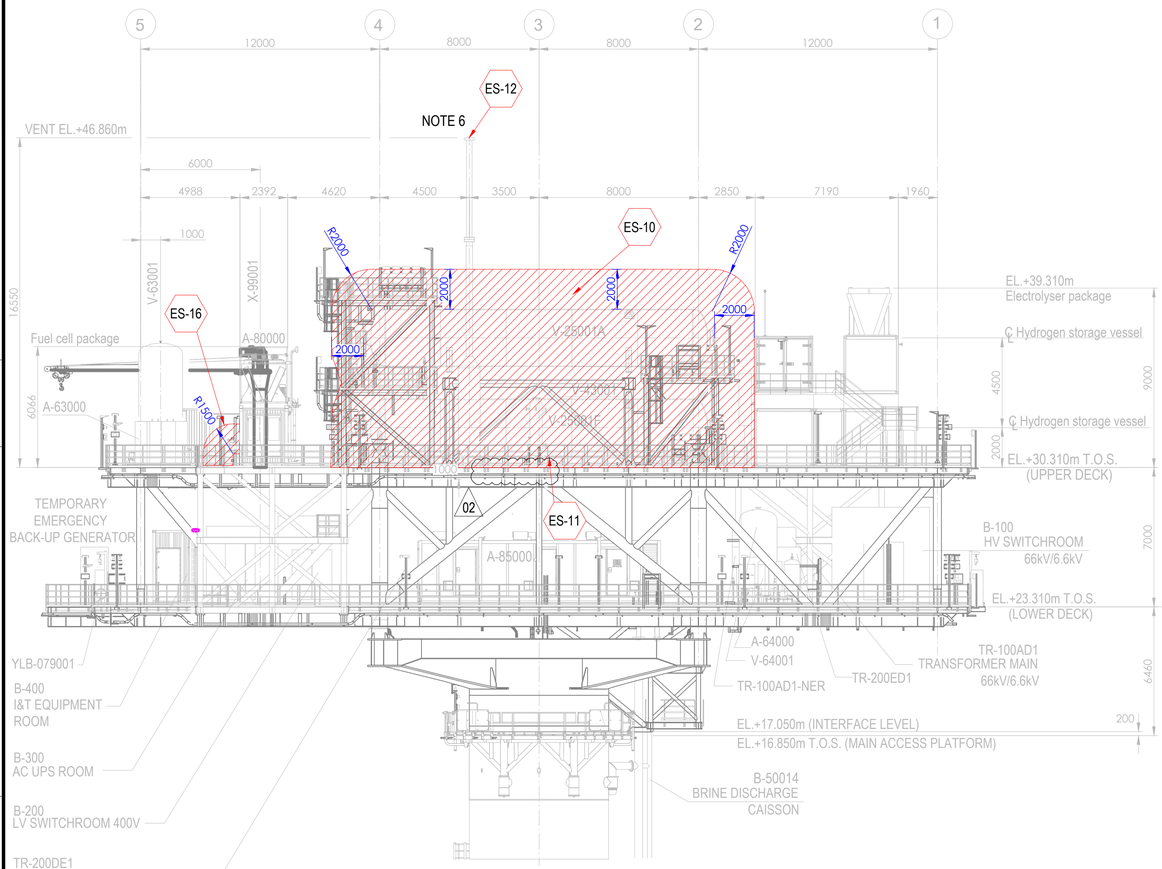
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

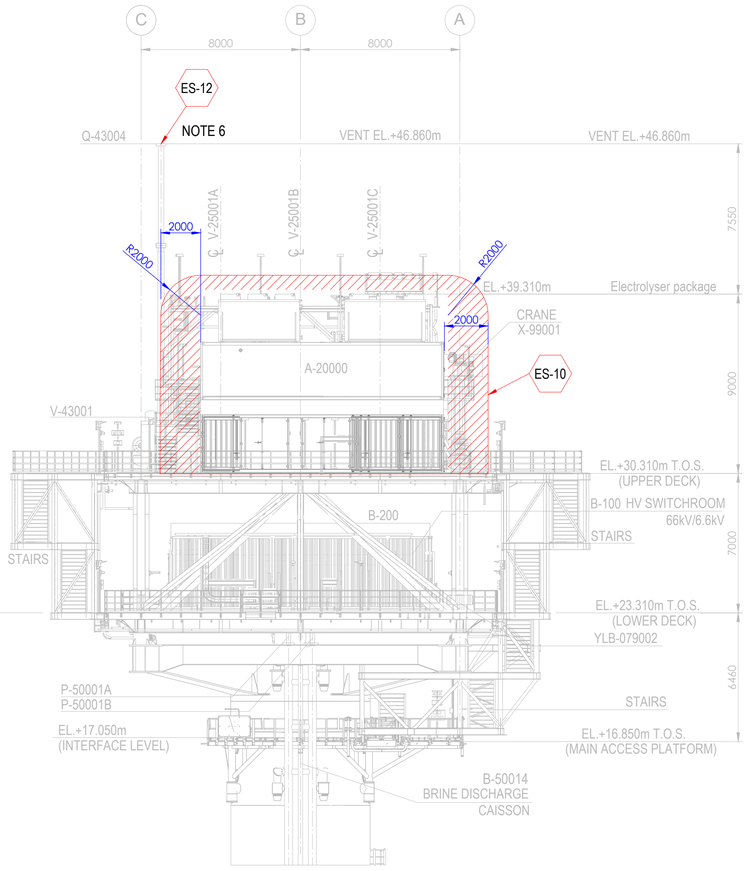
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

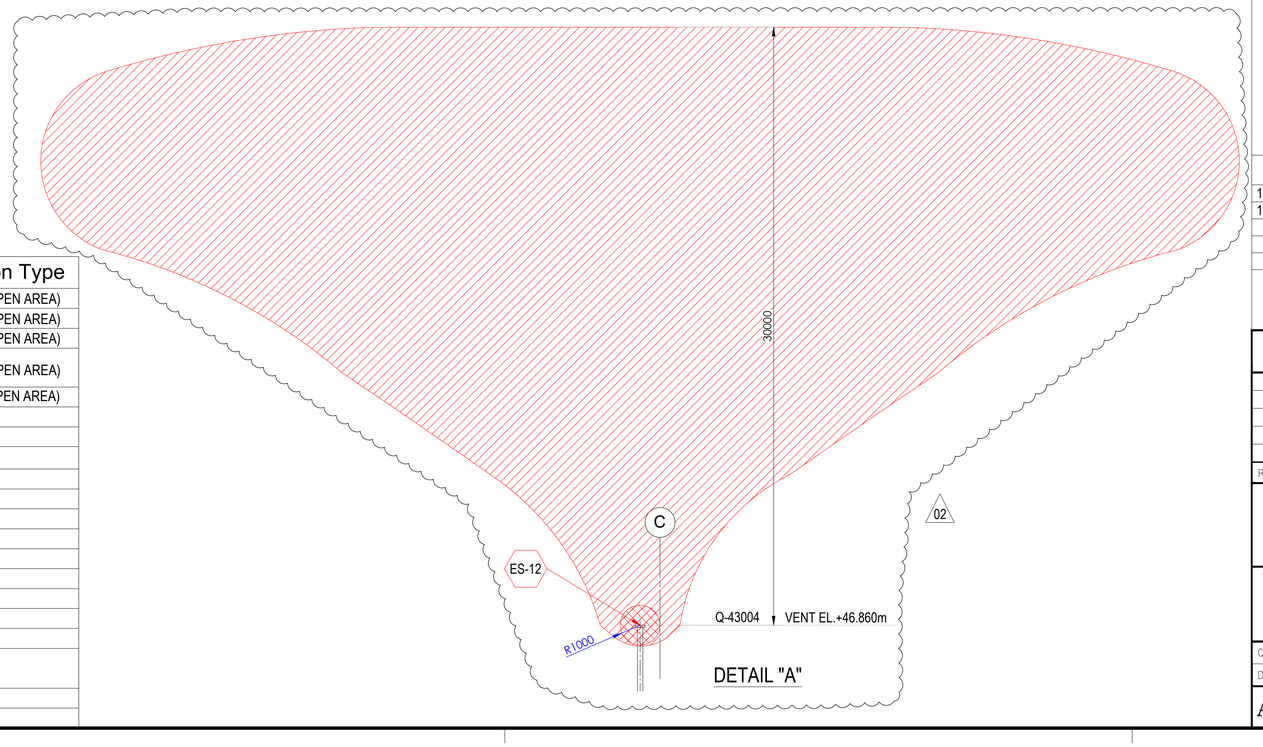


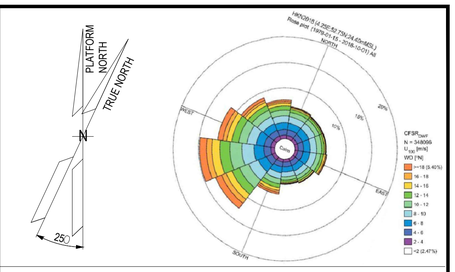
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-01	: JB Emergency Lighting Upper Deck - Circuit No. 1	Dwg	123A90-DDL-EL-DL-20118		
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD		
TASK	code	C10001657	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01

Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990007			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-ECEx FIDI 21.0015X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-01	: JB Emergency Lighting Upper Deck - Circuit No. 1			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001657	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-01	: JB Emergency Lighting Upper Deck - Circuit No. 1			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001657		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

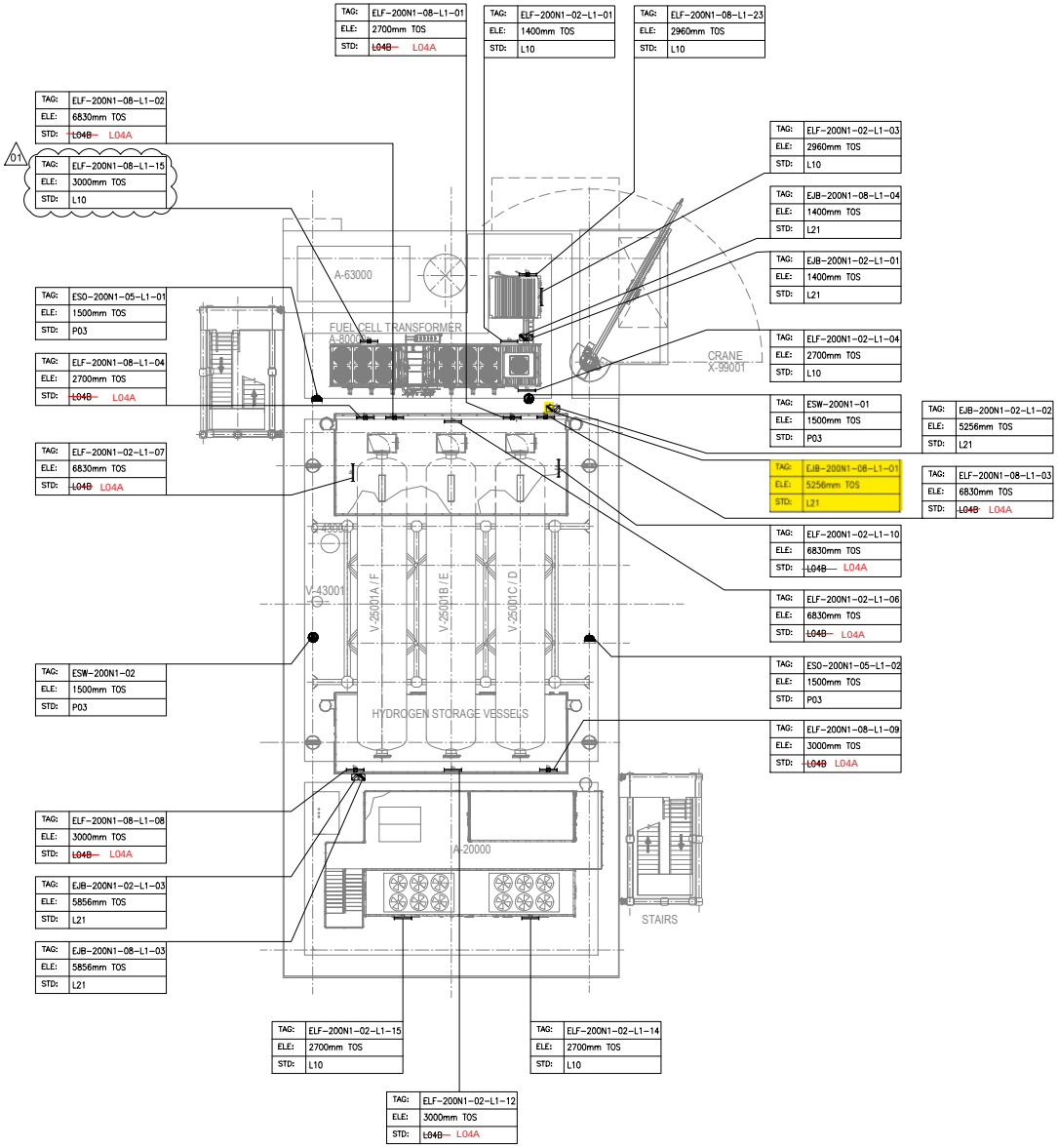
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

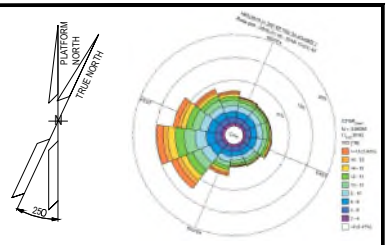
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-20	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:35:08.515Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-20T16:57:49.890Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20118

REV.	DATE	SIGNATURE
1_E	20/11/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

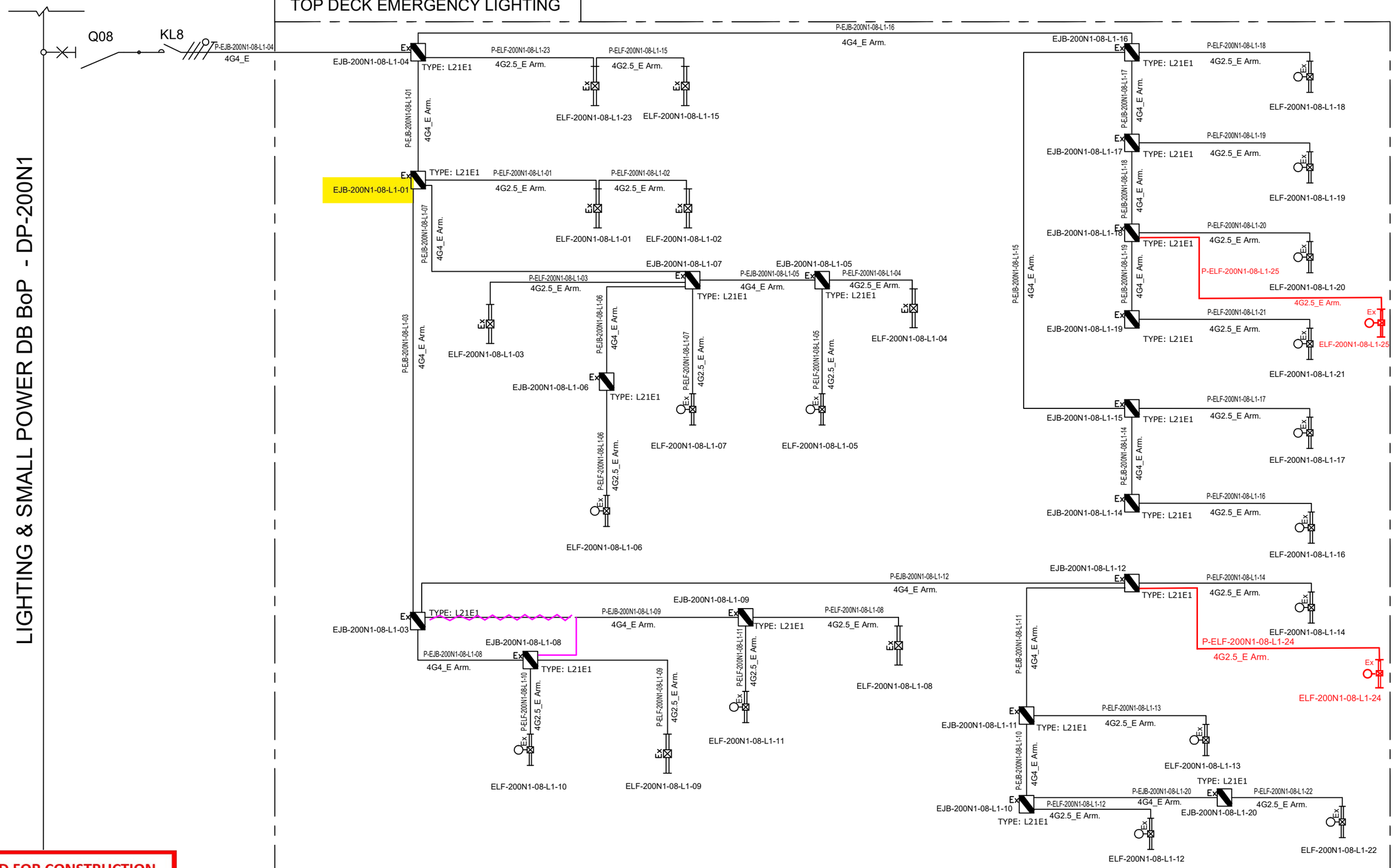
TITLE :
BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

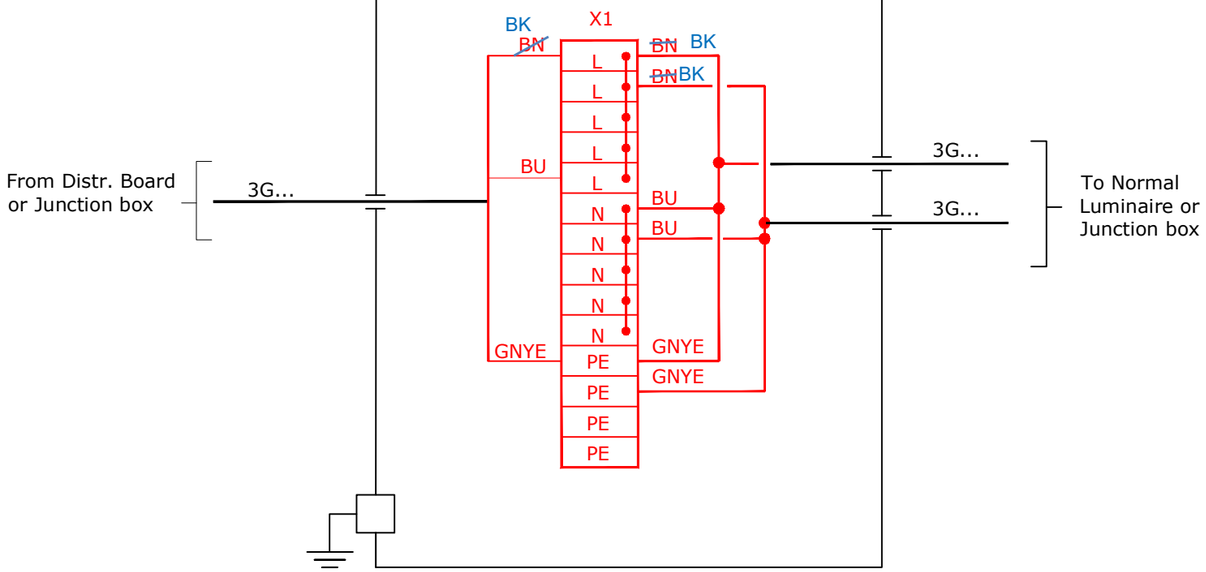
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

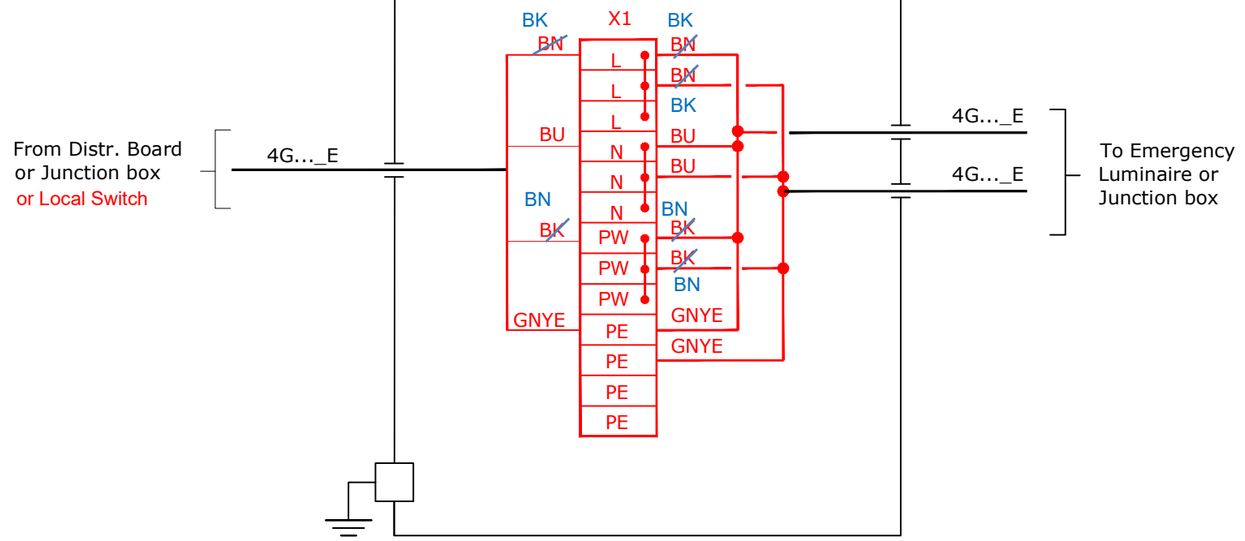
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

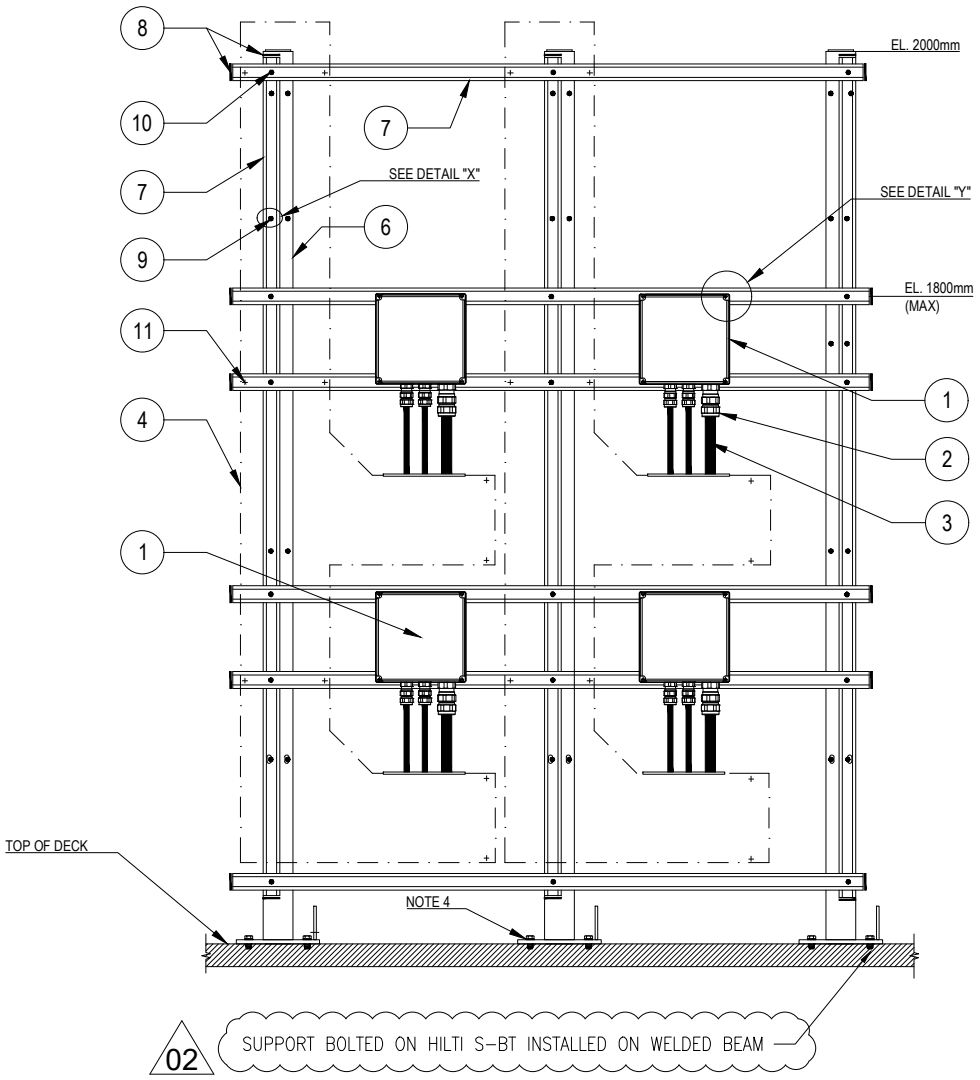
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

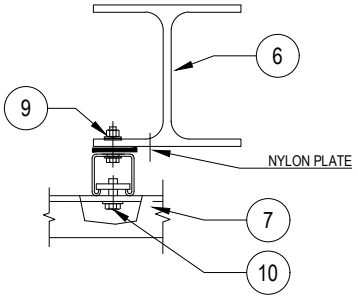
File Name : 123A90-DDL-EL-DG-20125

L21

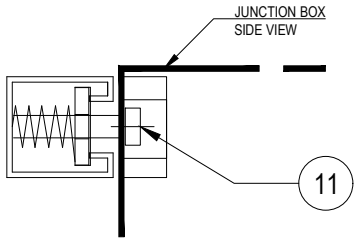


02

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX (Ex)	GRP			
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS			NOTE 2
3	ARMOURED/UNARMOURED CABLE				
4	CABLE LADDER WITH COVER	AISI 316L			
6	PROFILE SUPPORT	PAINTED C.S			
7	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
8	PLUG FOR U-CHANNEL	LPDE			
9	HEXAGONAL BOLT M10X40 WITH LARGE PLANE WASHER, NYLON PLANE WASHER, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10x40		
10	HEXAGONAL BOLT M12X30 COMPLETE WITH LARGE PLANE WASHER, PLANE WASHER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M12x30		
11	ALLEN KEY BOLT COMPLETE WITH PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x30		NOTE 3



DETAIL "X"



DETAIL "Y"

NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) FOR INSTRUMENT JUNCTION BOX USE HEXAGONAL BOLT M10X30 COMPLETE WITH PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING
4) SUPPORT BOLTED ON HILTI S-BT INSTALLED ON THE DECK

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
JUNCTION BOXES MOUNTED RACK SUPPORT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

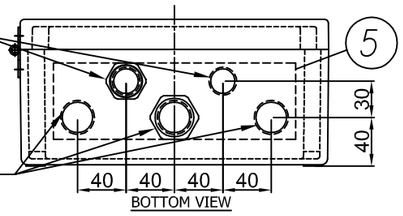
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

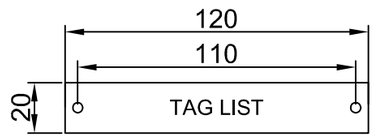
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

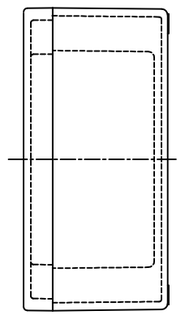
A002MAX

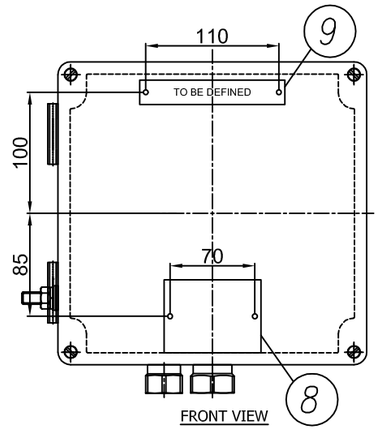
(9) PLATE DETAIL



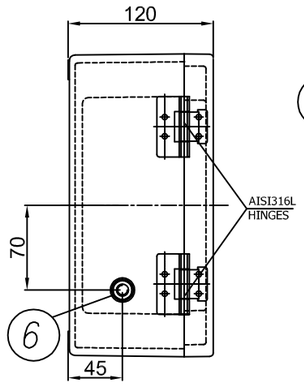
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

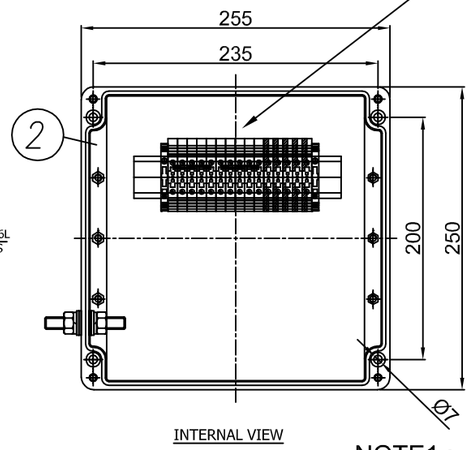

RIGHT VIEW



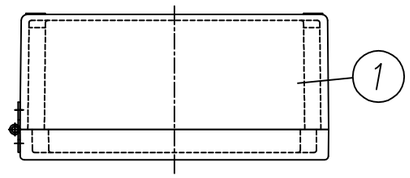
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

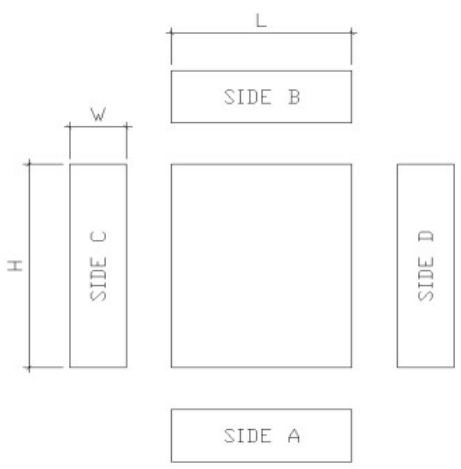
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

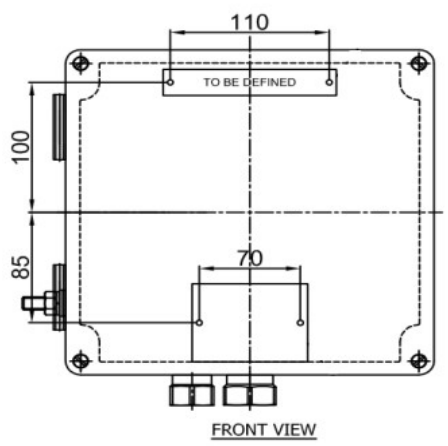
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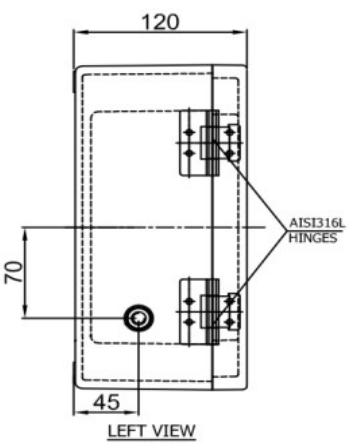
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
CB-200F4B	AC UPS F&G - Battery Isolator-B	CONTAINER B-300 (LOWER DECK)	1724000372	3W Power	Cortem Spa		EJBC	Zone 1	EPT 20 ATEX 4075X	1724000372-EL-DG-00011	II 2GDEx db IIC T6 Gb Ex tb IIIC T 85°C Db	-	N/A	True	N/A	False	
EAT-200N1-01	Trace Heating - Remote Ambient Thermostat	LOWER DECK	1724001647	nVent	nVent	1244-022663	ETS-05-A2-E-A	Zone 1	Baseefa 13ATEX0137	1724001647-EL-DD-00004	II 2(1)G Ex eb ia mb [ia Ga] IIC T5 Gb - 40ºC ≤ Ta ≤ +60ºC II 2D Ex tb IIIC T100ºC Db	-	N/A	True	N/A	False	
EHT-1001-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1002-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1003-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-B	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1005-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1006-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1007-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-2002-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EJB-200F2-01	Top Obstruction Lights Junction Box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990082	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
EJB-200F2-02	Intermediate obstruction lights junction box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990083	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_4
EJB-200N1-02-L1-01	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990045	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-02	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990044	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-03	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990043	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-02-L1-05	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990058	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-06	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990057	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-07	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990059	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-08	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990060	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-09	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990061	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-10	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990047	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-11	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990056	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-12	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990055	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-13	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990054	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-14	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990053	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-15	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990052	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-16	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990051	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-17	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990050	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-18	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990049	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-19	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990048	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-20	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990072	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-01	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990003	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-02	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990004	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-03	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990002	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-04	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990001	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-05	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990012	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-06	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990011	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-07	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990010	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-08	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990009	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-09	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990008	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-10	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990007	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-11	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990006	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-12	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990005	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-13	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990014	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-14	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990013	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-01	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990032	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-02	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990033	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-01	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990064	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-03	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990062	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-08-L1-04	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990065	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-05	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990077	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-06	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990078	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	

Fiditas
explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16] Confidential Report No. FIDI 21 CR 075

[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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3635

[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

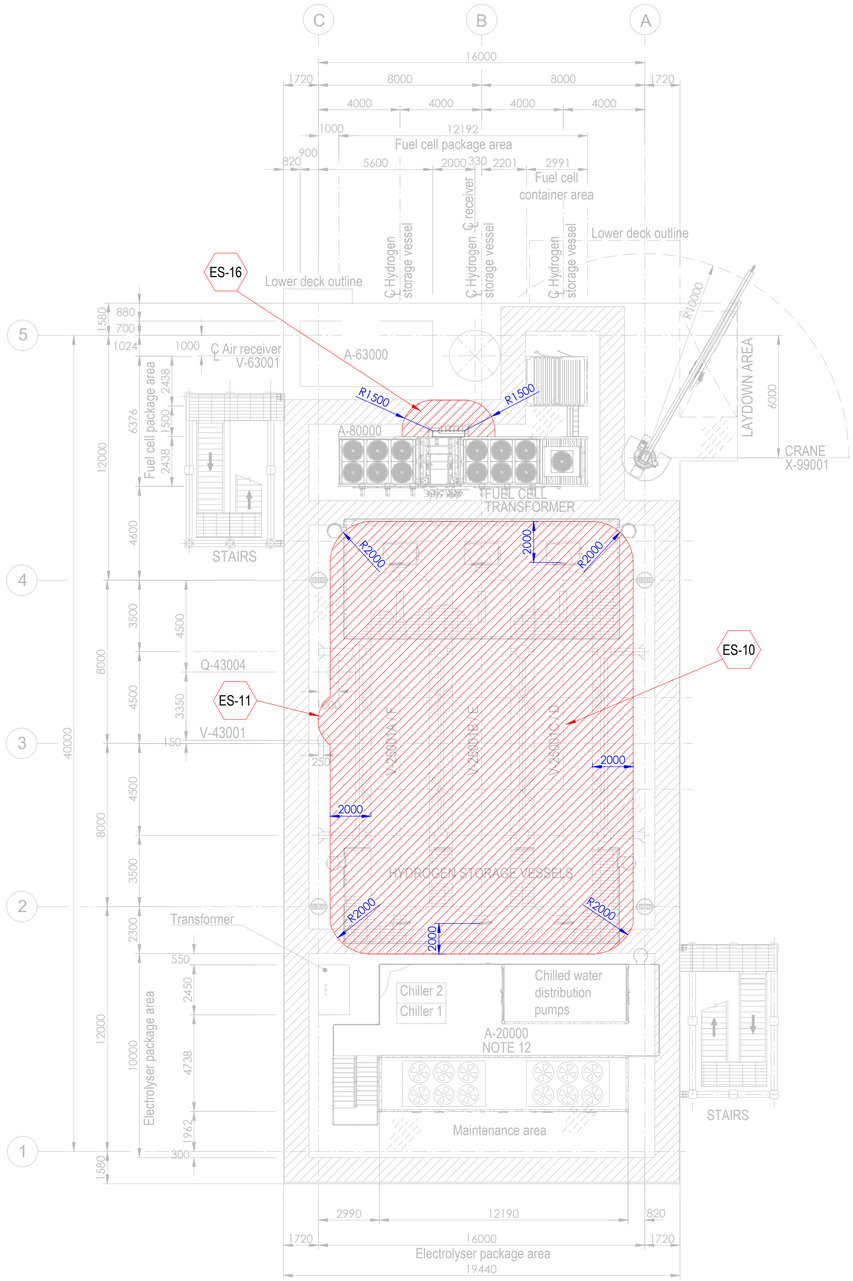
[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

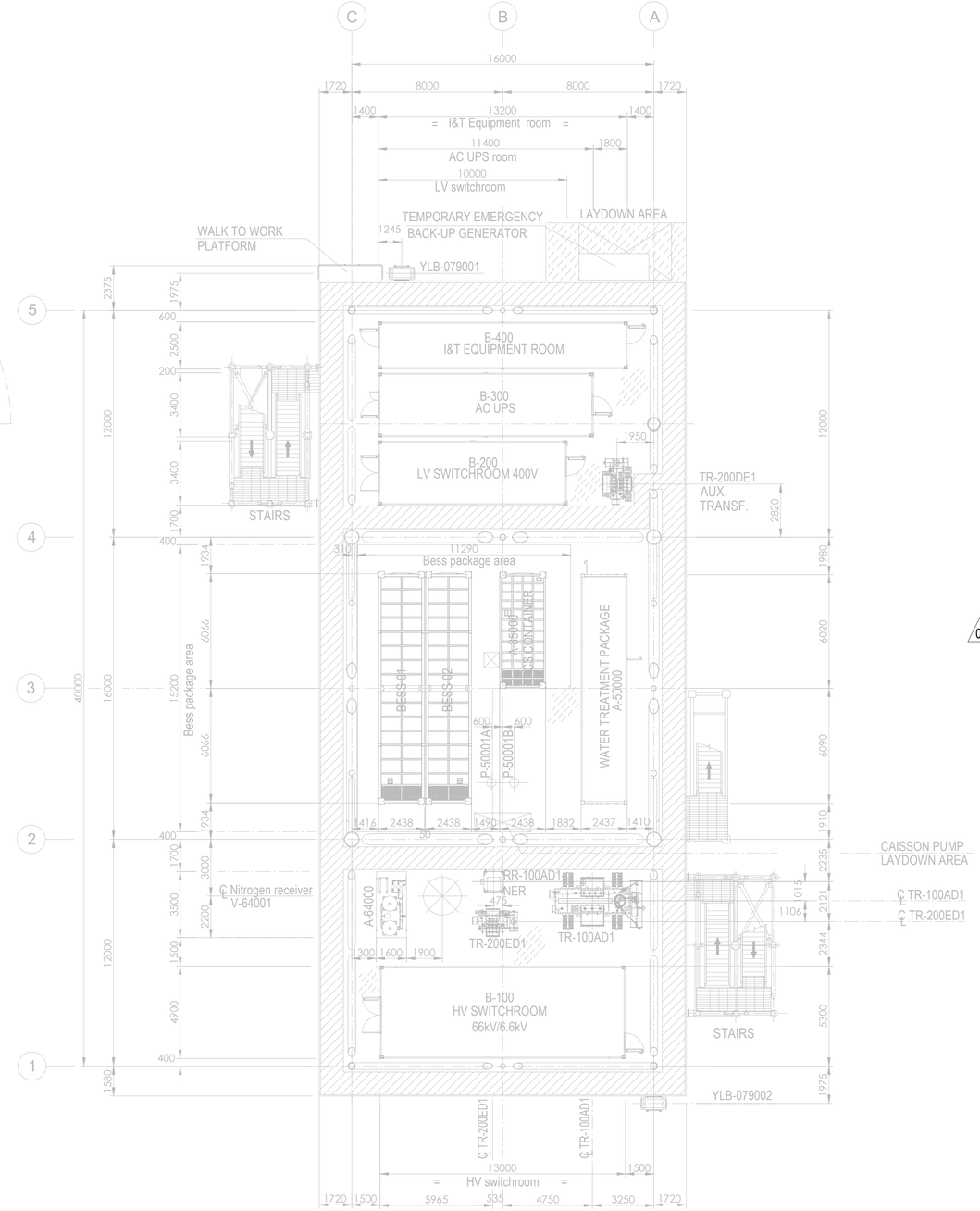
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



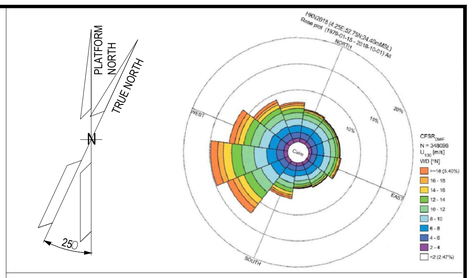
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

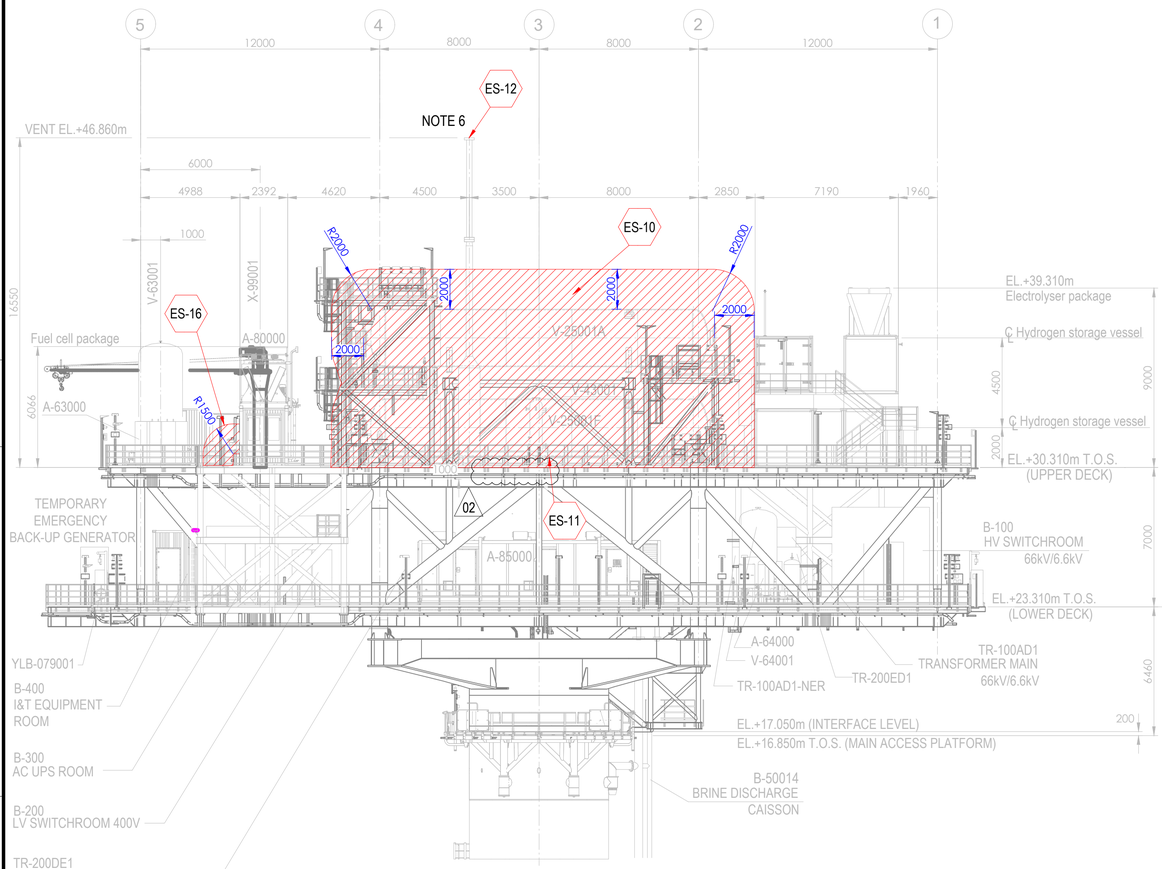
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

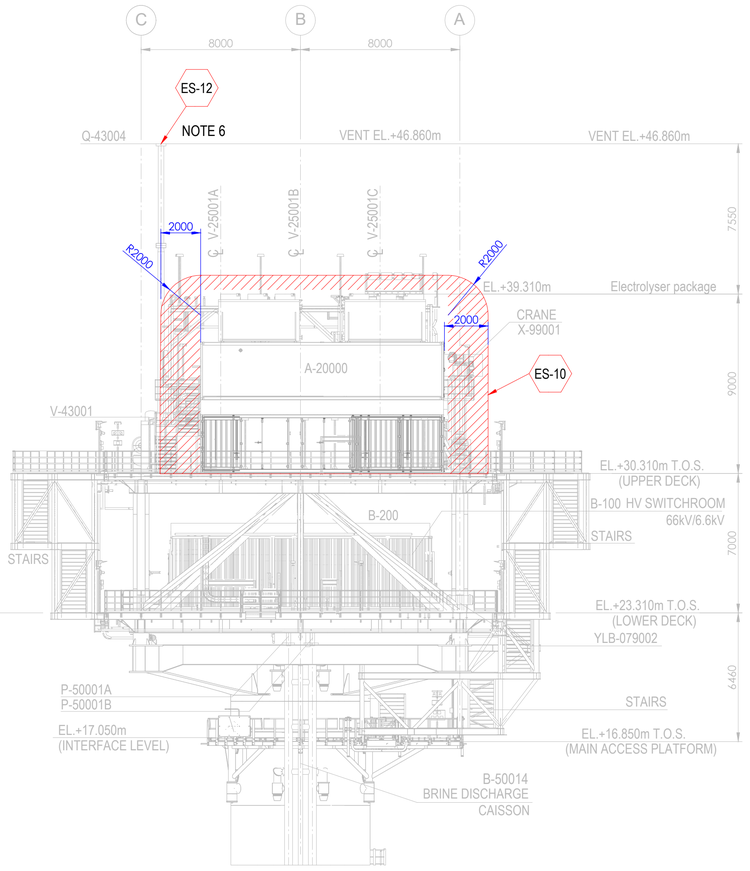
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

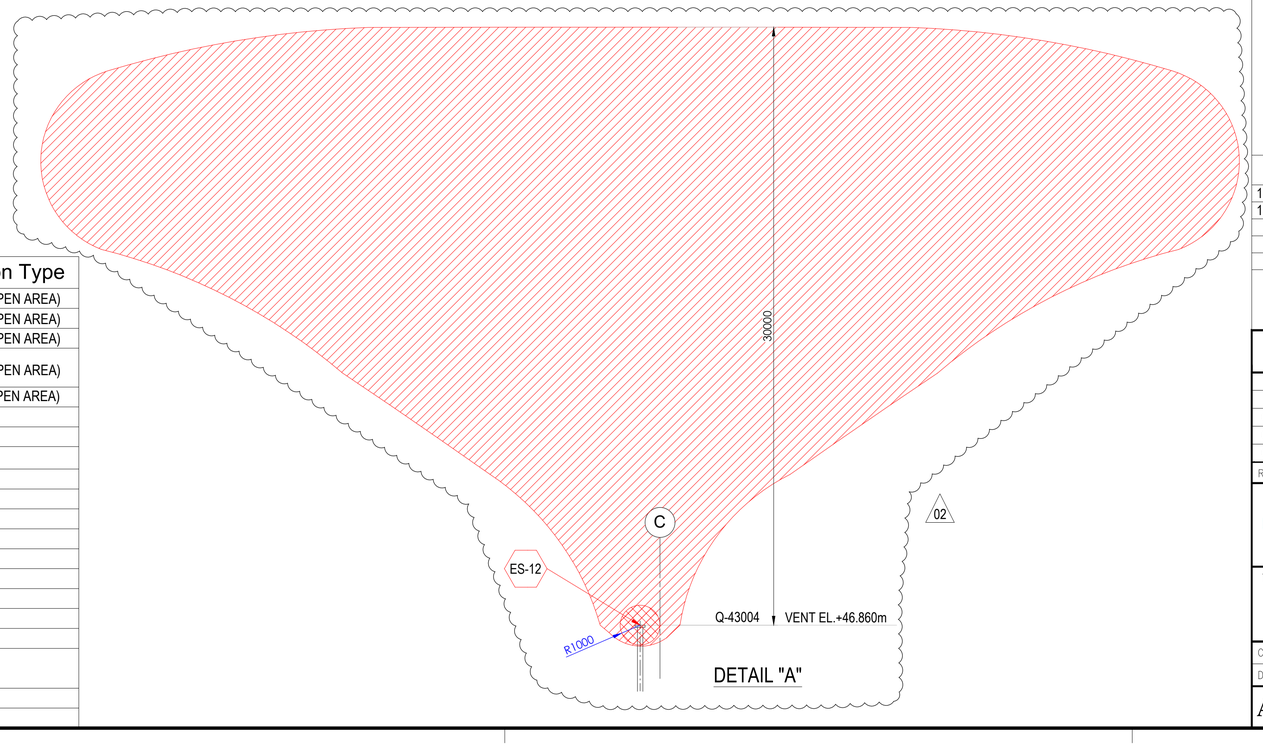


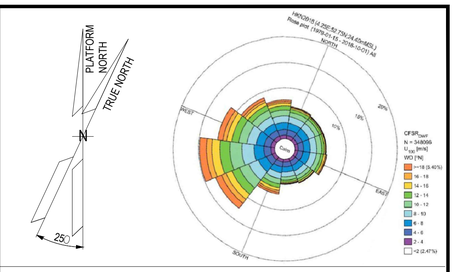
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	EJB-200N1-08-L1-03 : JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001659	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24P00297990013			
Manufacturer	TECHNOR ITALSMEA			**Model**		AQ-252612P			
Cert No.	FIDI 21 ATEX 0090X-ECEx FIDI 21.0015X			**Equipment Ambient Temp.**		-20 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	EJB-200N1-08-L1-03	: JB - EMERGENCY LIGHTING			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001659		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	EJB-200N1-08-L1-03	: JB - EMERGENCY LIGHTING		Dwg	123A90-DDL-EL-DL-20118	
	S/Sys	83-35	: Emergency Lighting Upper Deck		Module	UD	
TASK	code	C10001659	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

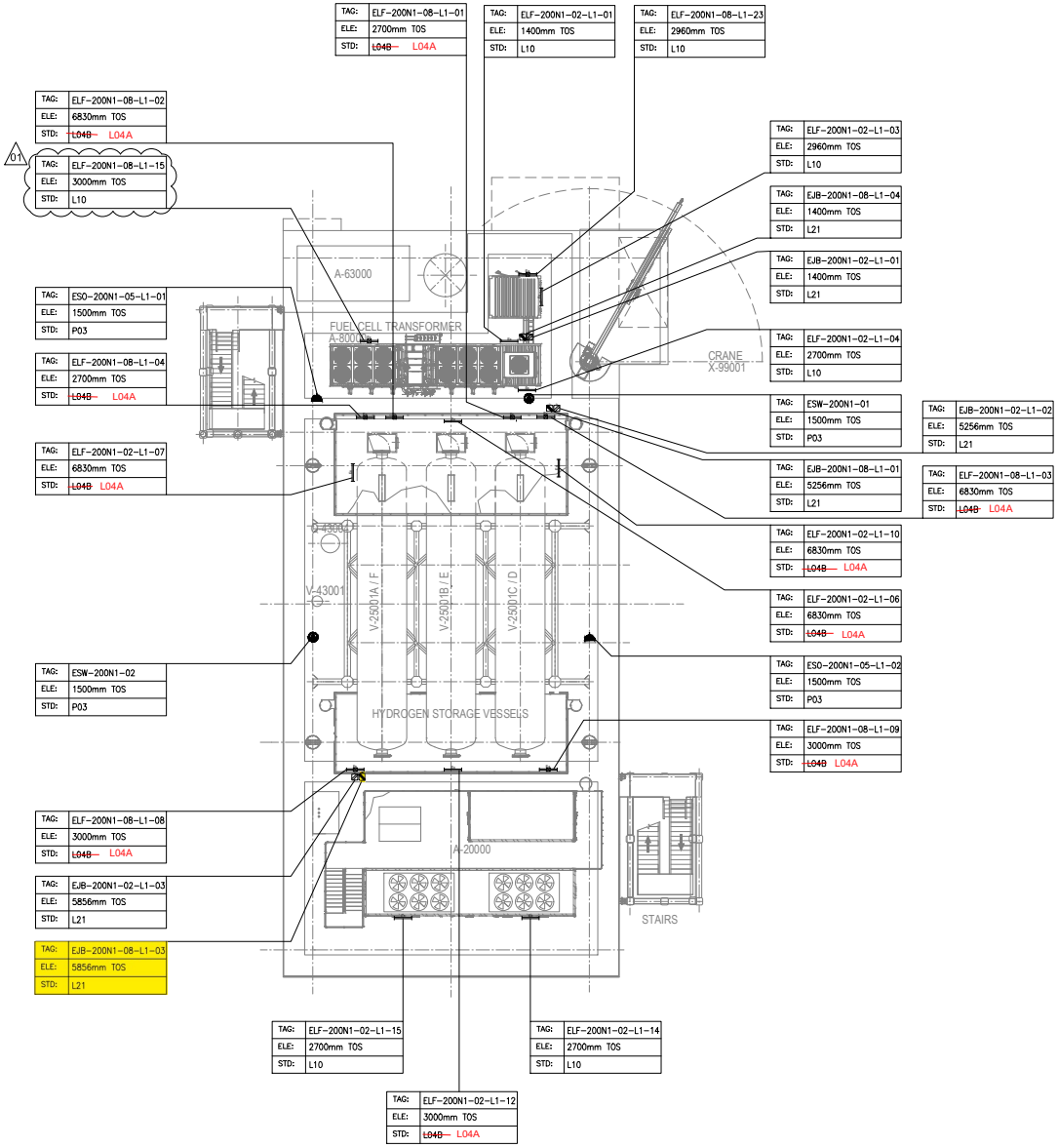
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

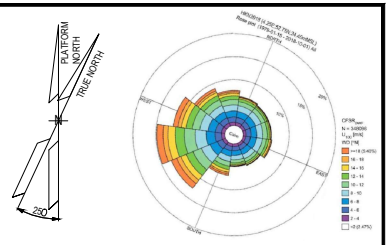
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-10	2025-01-18	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:35:32.758Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-18T07:43:55.498Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

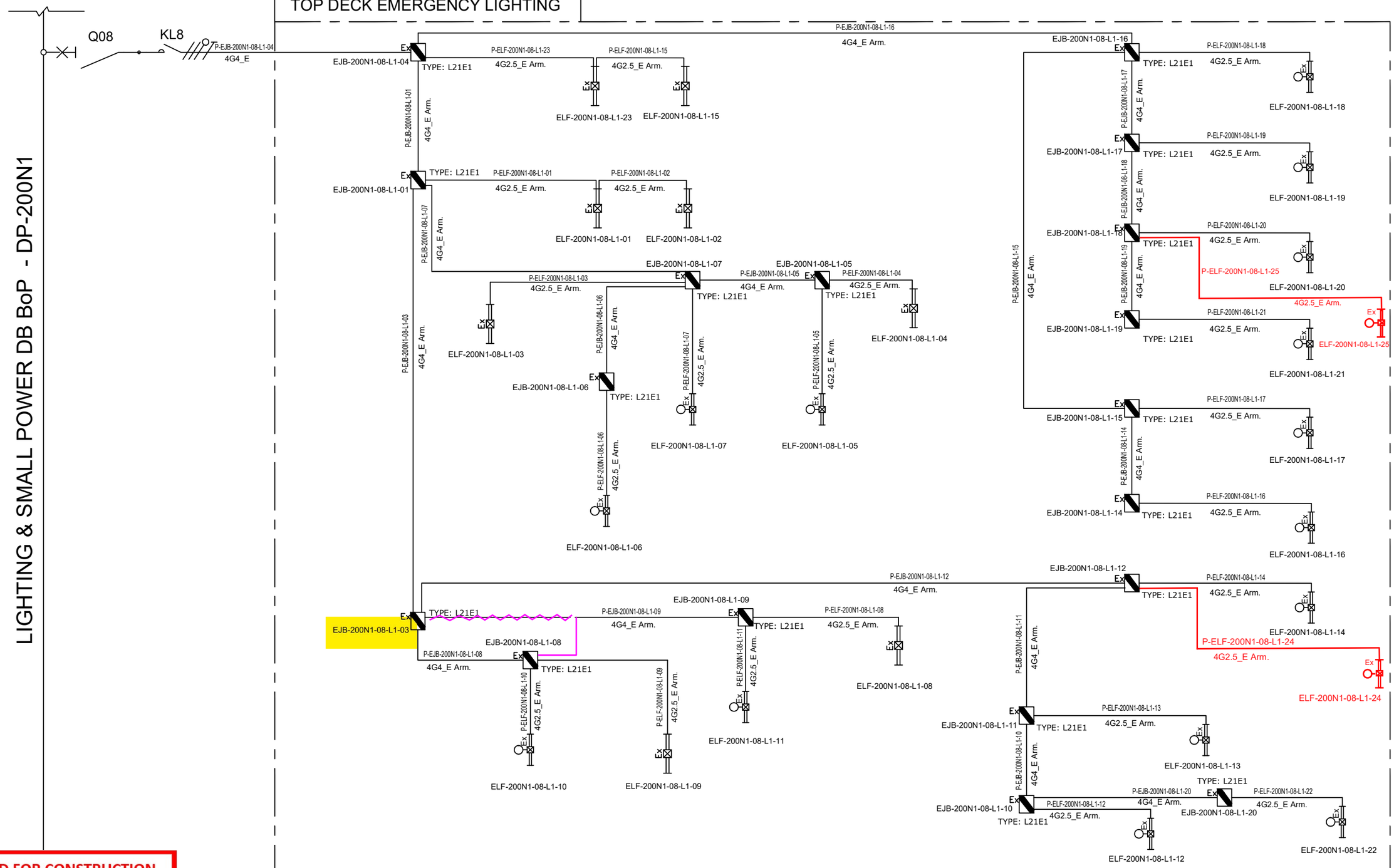
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

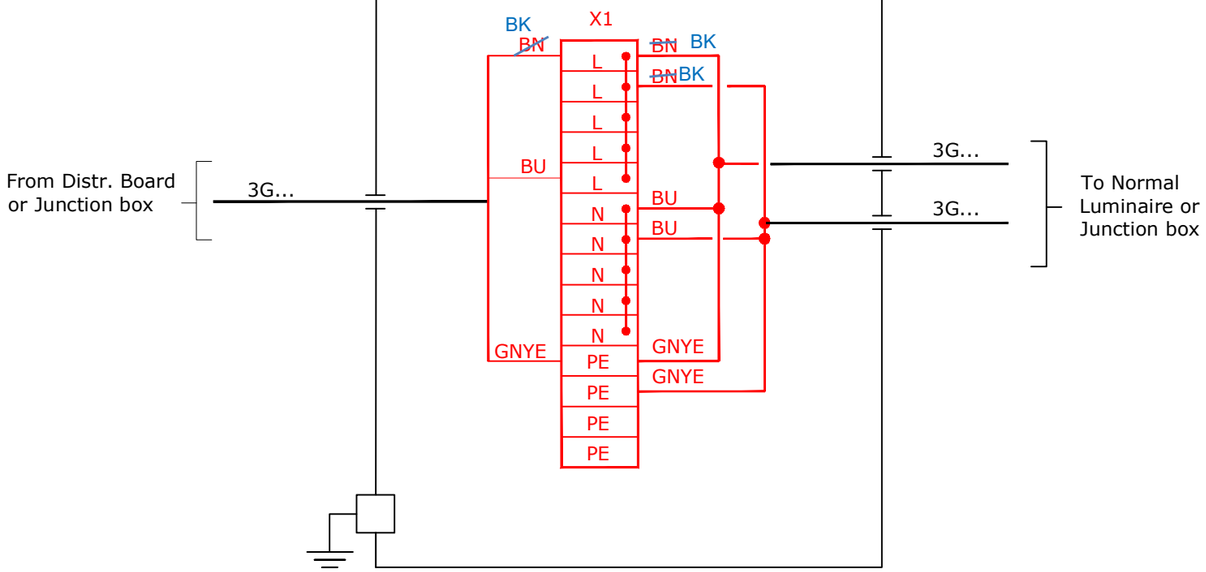
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

TYPE : L21N1 & L21N2

ITEM: NORMAL LIGHTING JUNCTION BOX

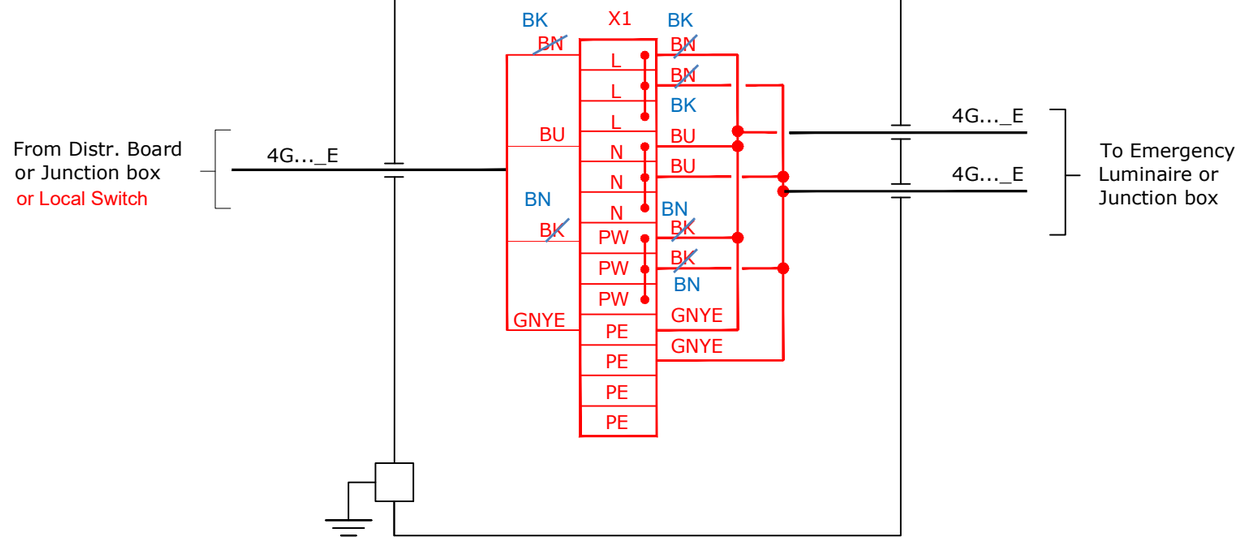
TAG : Typical



TYPE : L21E1 & L21E2

ITEM: EMERGENCY LIGHTING JUNCTION BOX

TAG : Typical



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TYPICAL JB INTERCONNECTING DIAGRAM

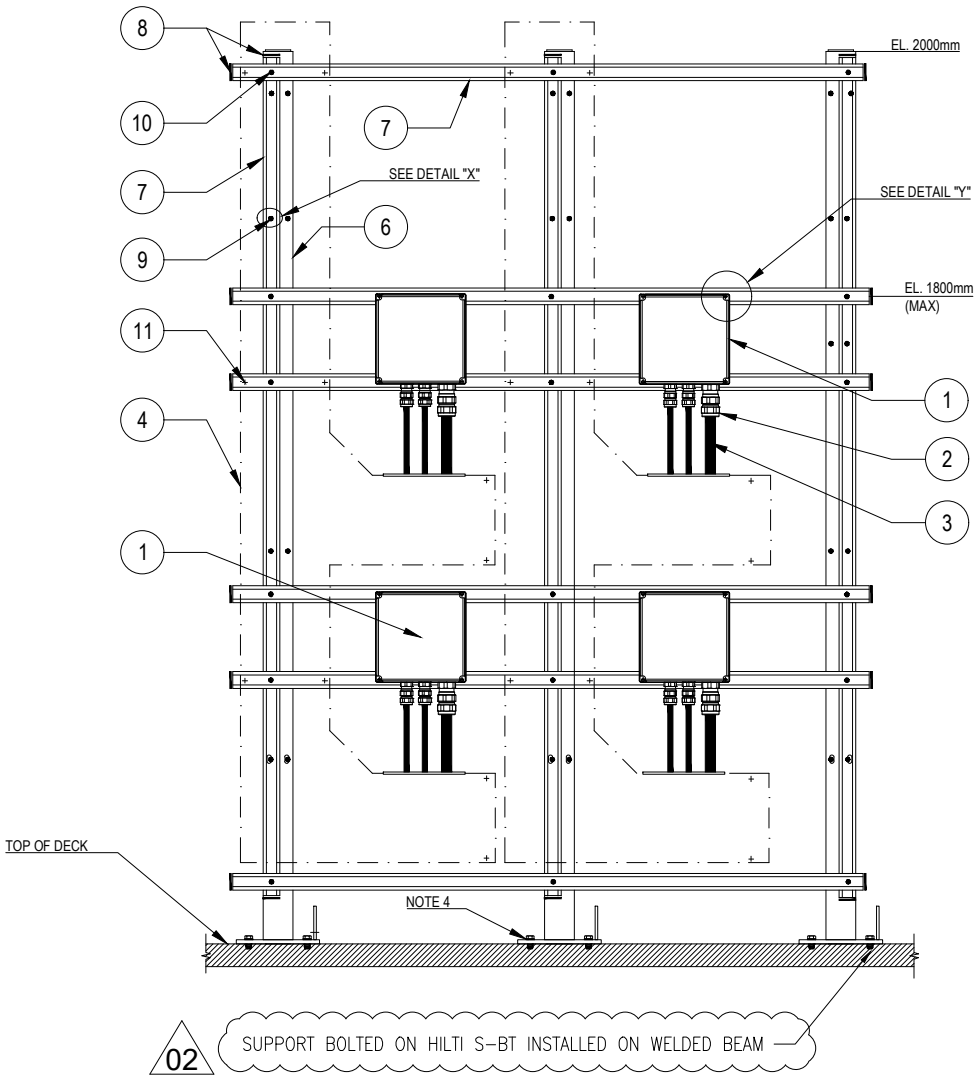
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DG-20125	016	01

F.to UNI A3: 420mmx297mm

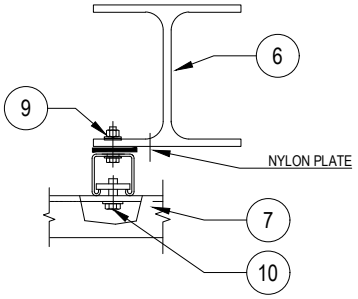
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L21

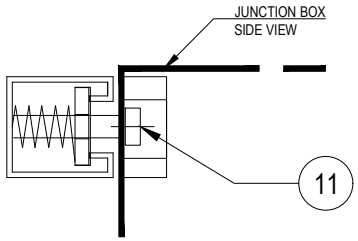


02

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX (Ex)	GRP			
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS			NOTE 2
3	ARMOURED/UNARMOURED CABLE				
4	CABLE LADDER WITH COVER	AISI 316L			
6	PROFILE SUPPORT	PAINTED C.S			
7	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
8	PLUG FOR U-CHANNEL	LPDE			
9	HEXAGONAL BOLT M10X40 WITH LARGE PLANE WASHER, NYLON PLANE WASHER, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M10x40		
10	HEXAGONAL BOLT M12X30 COMPLETE WITH LARGE PLANE WASHER, PLANE WASHER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M12x30		
11	ALLEN KEY BOLT COMPLETE WITH PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x30		NOTE 3



DETAIL "X"



DETAIL "Y"

NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) FOR INSTRUMENT JUNCTION BOX USE HEXAGONAL BOLT M10X30 COMPLETE WITH PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING
4) SUPPORT BOLTED ON HILTI S-BT INSTALLED ON THE DECK

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
JUNCTION BOXES MOUNTED RACK SUPPORT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

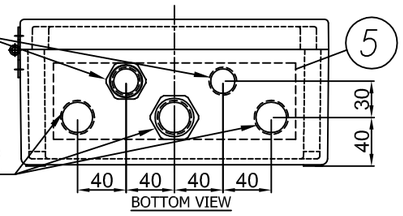
A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

(10)(4) N°2 PASSING HOLES Ø20.2
C/W N°1 BNK PLUG M20 +
N°1 DUSTPROOF PVC PLUG

(3)(3) N°3 PASSING HOLES Ø25.2
C/W N°1 BNK PLUG M25 +
N°2 DUSTPROOF PVC PLUG



BOTTOM VIEW

(8) I2400722-B015I00029809

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC
Via Italia 33 - 20060 Cassano (MI) ITALY

CE 0080 Ex II 2G II 2D
FIDI 21ATEX 0090X
IECEx FIDI 21.0015X
Year of construction:

MADE IN ITALY

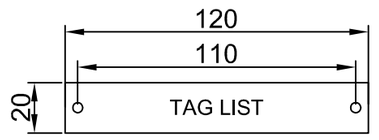
TYPE: AQ-252612P
230VAC 50Hz 20A
Max Dis. P. 6W

Ex eb IIC T6 Gb
Ex tb IIIC T85°C Db
IP66
T.amb. -20/+40°C
Serial Nr.

WARNINGS : DO NOT OPEN WHEN ENERGIZED

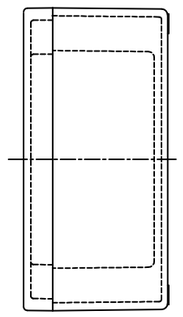
A002MAX

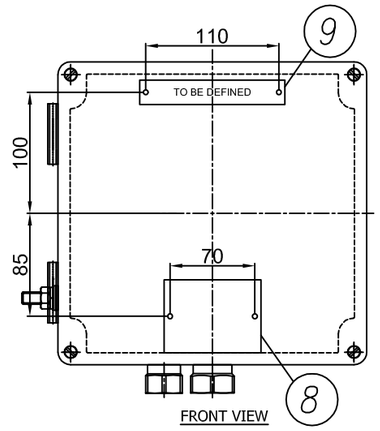
(9) PLATE DETAIL



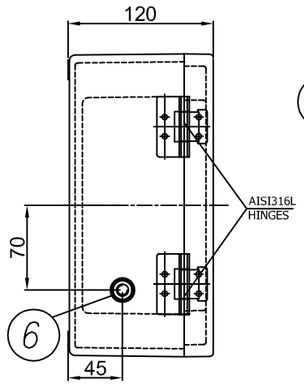
MATERIAL: LAMINATED PLASTIC
BACKGROUND: WHITE
LETTERS: BLACK

(7) Terminals numbered: NOTE 1

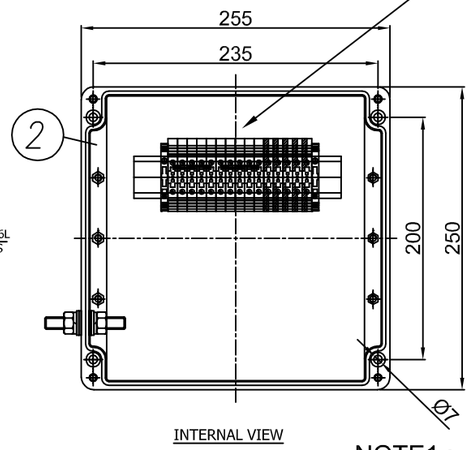

RIGHT VIEW



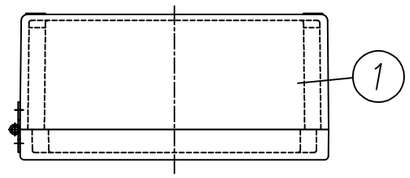
FRONT VIEW



LEFT VIEW



INTERNAL VIEW



TOP VIEW

NOTE1 :
- JB for Normal Lighting have terminals bridge: L-L-L-L-L, N-N-N-N-N, PE-PE-PE-PE-PE - JB for Emergency Lighting have terminals bridge: L-L-L, N-N-N, PW-PW-PW, PE-PE-PE-PE-PE

ITEM	DESCRIPTION	Pcs Q.TY	NOTE/MAT.	CODE	MANUFACTURER
11	DUSTPROOF PVC PLUG Ø25	2	–	.	TECHNOR ITALSMEA
10	DUSTPROOF PVC PLUG Ø20	1	–	.	TECHNOR ITALSMEA
9	LAMINATED PLASTIC TAG 120X20	1	–	.	TECHNOR ITALSMEA
8	AISI316L CERTIFICATE PLATE 80X60	1	–	.	TECHNOR ITALSMEA
7	BEIGE TERMINAL BLOCK SIZE 6 SQMM EARTH TERMINAL BLOCK SIZE 6 SQMM	10 5	WDU–6 WPE–6	.	WEIDMULLER
6	AISI316L INT/EXT EARTH BOLT M10	1	BTP–10	.	TECHNOR ITALSMEA
5	BRASS CONTINUITY PLATE THK. 0.8 MM	1	–	.	TECHNOR ITALSMEA
4	NICKEL PLATED BRASS PLUG M20	1	T20	.	TECHNOR ITALSMEA
3	NICKEL PLATED BRASS PLUG M25	1	T25	.	TECHNOR ITALSMEA
2	INTERNAL MOUNTING PLATE	1	PS–2526	.	TECHNOR ITALSMEA
1	GRP ENCLOSURE	1	AQ–252612P	.	TECHNOR ITALSMEA

-UNPAINTED (BLACK NATURAL)
Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001481–EL–DA–00003 | SHEET 004 | REV. 05

F.to UNI A3: 420mmx297mm

File Name : 1724001481–EL–DA–00003 Rev. 01

ENCLOSURE N°	TAG LIST	NORMAL LIGHTING	EMERGENCY LIGHTING
1	EJB-200N1-03-L2-04	X	
2	EJB-200N1-03-L2-03	X	
3	EJB-200N1-03-L2-01	X	
4	EJB-200N1-03-L2-02	X	
5	EJB-200N1-03-L2-12	X	
6	EJB-200N1-03-L2-11	X	
7	EJB-200N1-03-L2-10	X	
8	EJB-200N1-03-L2-09	X	
9	EJB-200N1-03-L2-08	X	
10	EJB-200N1-03-L2-07	X	
11	EJB-200N1-03-L2-06	X	
12	EJB-200N1-03-L2-05	X	
13	EJB-200N1-03-L2-14	X	
14	EJB-200N1-03-L2-13		X
15	EJB-200N1-09-L2-17		X
16	EJB-200N1-09-L2-01		X
17	EJB-200N1-09-L2-04		X
18	SPARE (TO BE PROVIDED BLANK)		X
19	EJB-200N1-09-L2-02		X
20	EJB-200N1-09-L2-15		X
21	EJB-200N1-09-L2-14		X
22	EJB-200N1-09-L2-13		X
23	EJB-200N1-09-L2-12		X
24	EJB-200N1-09-L2-11		X
25	EJB-200N1-09-L2-10		X
26	EJB-200N1-09-L2-09		X
27	EJB-200N1-09-L2-08		X
28	EJB-200N1-09-L2-07		X
29	EJB-200N1-09-L2-06		X
30	EJB-200N1-09-L2-05		X
31	EJB-200N1-09-L2-16	X	
32	EJB-200N1-04-L3-01	X	
33	EJB-200N1-04-L3-02	X	
34	EJB-200N1-10-L3-05		X
35	EJB-200N1-10-L3-06		X
36	EJB-200N1-10-L3-07		X
37	EJB-200N1-10-L3-08		X
38	EJB-200N1-10-L3-09		X
39	EJB-200N1-10-L3-02		X
40	EJB-200N1-10-L3-01		X
41	EJB-200N1-10-L3-03		X
42	EJB-200N1-10-L3-04		X
43	EJB-200N1-02-L1-03	X	
44	EJB-200N1-02-L1-02	X	
45	EJB-200N1-02-L1-01	X	
46	SPARE (TO BE PROVIDED BLANK)	X	
47	EJB-200N1-02-L1-10	X	
48	EJB-200N1-02-L1-19	X	
49	EJB-200N1-02-L1-18	X	
50	EJB-200N1-02-L1-17	X	
51	EJB-200N1-02-L1-16	X	
52	EJB-200N1-02-L1-15	X	
53	EJB-200N1-02-L1-14	X	
54	EJB-200N1-02-L1-13	X	
55	EJB-200N1-02-L1-12	X	
56	EJB-200N1-02-L1-11	X	
57	EJB-200N1-02-L1-06	X	
58	EJB-200N1-02-L1-05	X	
59	EJB-200N1-02-L1-07	X	
60	EJB-200N1-02-L1-08	X	
61	EJB-200N1-02-L1-09	X	
62	EJB-200N1-08-L1-03		X
63	SPARE (TO BE PROVIDED BLANK)		X
64	EJB-200N1-08-L1-01		X
65	EJB-200N1-08-L1-04		X
66	EJB-200N1-08-L1-19		X
67	EJB-200N1-08-L1-18		X
68	EJB-200N1-08-L1-17		X
69	EJB-200N1-08-L1-16		X
70	EJB-200N1-08-L1-15		X
71	EJB-200N1-08-L1-14		X
72	EJB-200N1-02-L1-20	X	
73	EJB-200N1-08-L1-12		X
74	EJB-200N1-08-L1-11		X
75	EJB-200N1-08-L1-10		X
76	EJB-200N1-08-L1-20		X
77	EJB-200N1-08-L1-05		X
78	EJB-200N1-08-L1-06		X
79	EJB-200N1-08-L1-07		X
80	EJB-200N1-08-L1-09		X
81	EJB-200N1-08-L1-08		X
82	EJB-200F2-01	X	
83	EJB-200F2-02	X	
84	SPARE (TO BE PROVIDED BLANK)	X	
85	SPARE (TO BE PROVIDED BLANK)	X	
86	SPARE (TO BE PROVIDED BLANK)	X	
87	SPARE (TO BE PROVIDED BLANK)	X	
88	SPARE (TO BE PROVIDED BLANK)	X	
89	SPARE (TO BE PROVIDED BLANK)		X
90	SPARE (TO BE PROVIDED BLANK)		X
91	SPARE (TO BE PROVIDED BLANK)		X
92	SPARE (TO BE PROVIDED BLANK)		X

Q.TY 92, ITEM 20: 2JBXXGPEE, ELEJB02

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
05	20/12/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
04	26/11/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
03	25/10/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	FB	OB	OB	ACCEPTED FOR CONSTRUCTION (AFC)
00	30/07/24	FB	OB	OB	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)

Junction Box for Normal & Emergency Lighting–Tag List

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1724001481-EL-DA-00003

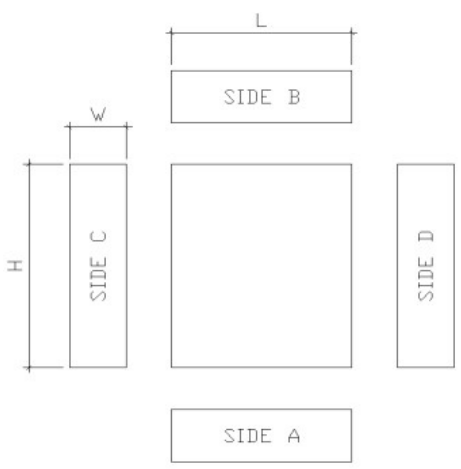
SHEET 005

REV. 05

F.to UNI A3: 420mmx297mm

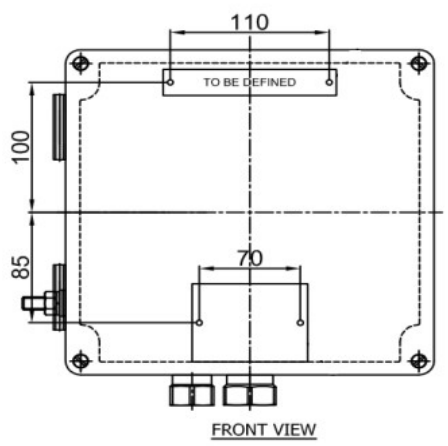
File Name : 1724001481-EL-DA-00003 Rev. 01

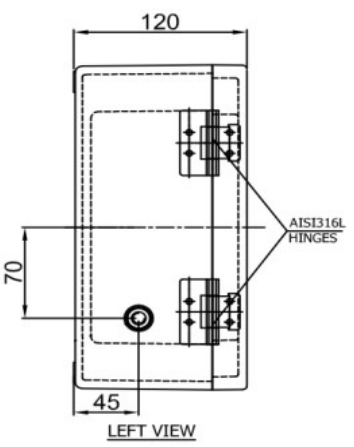
Row	Data Sheet for Control Stations, Junction Boxes and Sockets				Rev.
1	Junction Box for Normal & Emergency Lighting (Exdb)				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by Vendor	AQ-252612P		01
4	Serial Number	by Vendor	B011041010004		01
5	Quantity	43+5(spare)		(39+9 spare)	01
6	Appkication	Lighting pole JB/Lighting JB			00
7	**Installation area**				
8	Indoor/Outdoor	Outdoor			00
9	Safe Area/Hazardous Area	Hazardous area			00
10	Zone 1/Zone 2	Zone-1			00
11	Temp. Class	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex eb IIC, T6 Gb		01
12	**Electrical input data**				
13	Voltage	230 V ac	230 V ac		01
14	Number of Phases	1ph + N + PE			00
15	**Material**				
16	Body	GRP	GRP		01
17	Execution	Ex eb	Ex eb		00
18	Protection Degree	IP56	IP 66		01
19	**Accessories**				
20	Hinged Cover	Required	AISI316L Hinges		01
21	Gasket	Required			00
22	Removable Gland Plates	Required	Brass Continuity plate 0.8mm thick		01
23	Internal Mounting Plate	Thickness 3mm threaded		connected to Internal ground bar	00
24	Internal Ground Bar	Required		connected to earth stud	00
25	Earth Stud	Required			00
26	Drainage Valve	Required			00
27	Pad lockable Cover	Required			00
28	Identification Label	Trafolite/ Stainless Steel	Laminated Plastic	for all label	01
29	**Side 'A'**				
30	Hubs Qty.	5	5		01
31	Size	No.3 M25, No.2 M20	No.3 Ø 25.2 mm, No.2 Ø 20.2 mm		01
32	Thread	ISO-M			00
33	Plug	No. 1 M20, No.1 M25	No. 1 Ø 20.2 mm, No.1 Ø 25.2 mm	nickel-plated brass	01
34	**Side 'B'**				
35	Hubs Qty.	Not Required			00
36	Size	NA			00
37	Thread	NA			00
38	**Side 'C'**				
39	Hubs Qty.	Not Required			00
40	Size	NA			00
41	Thread	NA			00
42	**Side 'D'**				
43	Hubs Qty.	Not Required			00
44	Size	NA			00
45	Thread	NA			00
46	**Terminals**				
47	Size [mm^2]	Suitable for 6 Sq.mm & 2.5 Sq.mm Cable	M25 & M20	suitable with wire-end ferrules DIN 46228	01
48	Qty.	n°5 for Ph // n°5 for N // n°5 for PE	n°5 for Ph // n°5 for N // n°5 for PE	Ex - jumpered	01
49	**Bonding Cable (yellow/Green)**				
50	Size [mm^2]	by vendor		6 mm^2	01
51	Qty.	Min. 0.15m			00
52	**Dimension**				
53	Height 'H' [mm]	by vendor	120 mm		01
54	Width 'W' [mm]	by vendor	250 mm		01
55	Length 'L' [mm]	by vendor	255 mm		01
56	Weight [Kg]	by vendor	2.65 Kg		01
57	JB Code (*)	Remarks			
58					



NOTES:

(*) Filled by Vendor





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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
CB-200F4B	AC UPS F&G - Battery Isolator-B	CONTAINER B-300 (LOWER DECK)	1724000372	3W Power	Cortem Spa		EJBC	Zone 1	EPT 20 ATEX 4075X	1724000372-EL-DG-00011	II 2GDEx db IIC T6 Gb Ex tb IIIC T 85°C Db	-	N/A	True	N/A	False	
EAT-200N1-01	Trace Heating - Remote Ambient Thermostat	LOWER DECK	1724001647	nVent	nVent	1244-022663	ETS-05-A2-E-A	Zone 1	Baseefa 13ATEX0137	1724001647-EL-DD-00004	II 2(1)G Ex eb ia mb [ia Ga] IIC T5 Gb - 40ºC ≤ Ta ≤ +60ºC II 2D Ex tb IIIC T100ºC Db	-	N/A	True	N/A	False	
EHT-1001-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1002-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1003-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1004-B	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1005-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1006-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-1007-A	Self-regulating heat cable	LOWER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EHT-2002-A	Self-regulating heat cable	UPPER DECK	1724001647	nVent	nVent	469145-000	3BTV2-CT	Zone 1	SGS20ATEX0048X	1724001647-EL-DD-00004	II 2 GD Ex 60079-30-1 eb IIC T6 Gb	-	N/A	True	N/A	True	
EJB-200F2-01	Top Obstruction Lights Junction Box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990082	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3
EJB-200F2-02	Intermediate obstruction lights junction box	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990083	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_4
EJB-200N1-02-L1-01	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990045	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-02	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990044	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-03	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990043	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-02-L1-05	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990058	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-06	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990057	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-07	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990059	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-08	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990060	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-09	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990061	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-10	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990047	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-11	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990056	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-12	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990055	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-13	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990054	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-14	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990053	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-15	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990052	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-16	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990051	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-17	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990050	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-18	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990049	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-19	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990048	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-02-L1-20	Normal Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990072	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-01	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990003	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-02	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990004	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-03	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990002	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-04	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990001	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-05	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990012	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-06	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990011	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-07	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990010	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-08	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990009	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-09	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990008	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-10	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990007	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-11	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990006	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-12	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990005	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-13	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990014	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-03-L2-14	Normal Lighting JB	LOWER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990013	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-01	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990032	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-04-L3-02	Stair Normal Lighting JB	LOWER DECK STAIRS	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990033	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-01	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990064	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-03	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990062	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3
EJB-200N1-08-L1-04	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990065	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-05	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990077	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	
EJB-200N1-08-L1-06	Emergency Lighting JB	UPPER DECK	1724001481	Italsmea	TECHNOR ITALSMEA	24P00297990078	AQ-252612P	ZONE1/21	FIDI 21ATEX 0090X IECEx FIDI 21.0015X	1724001481-EL-DA-00003	Ex eb IIC T6 Gb Ex tb IIIC T85°C Db IP66	N/A	N/A	True	N/A	False	

Fiditas
explosion safety solutions

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[1] # EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X** Issue: **1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL / EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 21 CR 075**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**EN 60079-1:2014**	**EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012	**EN 60079-18:2015/A1:2017**	**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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This certificate may only be reproduced in its entirety, without any change, schedule included

[12] The marking of the product shall include the following:



II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

Our ref.: 21.CRT.400

Date: 23. 12.2021.

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Fiditas Ltd. Karlovačka cesta 197, 10250 Zagreb-Lučko, Croatia
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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 21 ATEX 0090X**

[15] **Description of product**

Junction boxes, local control stations and local control panels are made of 'eb' and 'tb' enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions, which shall house 'eb' and/or 'ia/ib' terminals and/or Ex components or Ex equipment made in different type of Ex protection. All Ex terminals, Ex components and Ex equipment are covered by their own ATEX certificates.

The terminals and components are be used according to data available in related component certificates, in relevant temperature range, voltage and current limitations. The terminals must be fitted in accordance with EN IEC 60079-0 and EN IEC 60079-7 with regards to creepage and clearance distances, and according to related safety instructions.

The cover is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models). The cover of stainless-steel enclosure can be also fixed the body with looking devices, between body and cover a gasket guarantee the protection degree IP66. The IP degree of junction boxes, local control stations and local control panels depend on the components actually mounted. The walls and the bottom of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents.

The cable glands or plugs, with separate ATEX certificate, made in type of protection 'eb' and/or 'tb' with appropriate IP protection are mounted according to related manufacturer's installation instructions. Each enclosure is provided with internal earthing certified terminal or earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt. Metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:
- Externally installed accessories as specified in manufacturer documents,
- Drain breath device type ECR3, included in this certificate,
- Internal/external earthing plate.

Model identification

Junction boxes

A(1)-(2) (3) (4) (5) (6)	(1) –	**Q**: Square size **R**: Rectangular size
	(2) (3) (4)	dimension, in cm
	(5)	Material **P**: Glass fiber reinforced polyester resin **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
SB- (2) (3) (4)	(2) (3) (4)	dimension, in cm
ST- (2) (3) (4)	(2) (3) (4)	dimension, in cm

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Panel boards

EFE- (2) (3) (4) (6)	(2) (3) (4)	dimension, in cm
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C
EFXE- (2) (3) (4) (5) (6)	(2) (3) (4)	dimension, in cm
		Material
	(5)	**SB** or **ST**: stainless steel **AL**: Aluminium Alloy
	(6)	None: up to internal temperature of 105°C **HT**: up to internal temperature of 130°C

Technical data:

Electrical data:	According to Ex component to actually installed
Ambient temperature:	-50°C ÷ +95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of +40 °C to +95 °C
Mechanical protection:	IP66/IP67 depending on models IP66 without swing handle element IP55 with swing handle element

Temperature class and/or maximum surface temperature of any junction box or control panel depend on ambient temperature and internal power dissipation. The values that must be observed are given in relevant tables in this certificate.

For commercial reasons model name listed in the tables below can be modified as follows: first (2) and second (3) pair of digits can be reversed.

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Model sizes

Polyester High Temperature		Aluminium High Temperature	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
		AR-236011AL-HT	EFXE-236011AL-HT
		AR-314011AL-HT	EFXE-314011AL-HT
		AR-314014AL-HT	EFXE-314014AL-HT
		AR-314018AL-HT	EFXE-314018AL-HT
		AR-314023AL-HT	EFXE-314023AL-HT
		AR-316011AL-HT	EFXE-316011AL-HT
		AR-316018AL-HT	EFXE-316018AL-HT
		AQ-606020AL-HT	EFXE-606020AL-HT

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Polyester		Aluminium		Stainless steel	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL	SB-101210	EFXE-101210SB
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL	SB-151510	EFXE-151510SB
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL	SB-142013	EFXE-142013SB
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL	SB-202010	EFXE-202010SB
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL	SB-202016	EFXE-202016SB
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL	SB-202713	EFXE-202713SB
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL	SB-272713	EFXE-272713SB
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL	SB-203016	EFXE-203016SB
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL	SB-273513	EFXE-273513SB
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL	SB-282816	EFXE-282816SB
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL	SB-204016	EFXE-204016SB
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL	SB-353516	EFXE-353516SB
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL	SB-282827	EFXE-282827SB
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL	SB-355016	EFXE-355016SB
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL	SB-383816	EFXE-383816SB
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL	SB-384516	EFXE-384516SB
		AR-162609AL	EFXE-162609AL	SB-385716	EFXE-385716SB
		AQ-181810AL	EFXE-181810AL	SB-505016	EFXE-505016SB
		AR-182810AL	EFXE-182810AL	SB-383827	EFXE-383827SB
		AR-202311AL	EFXE-202311AL	SB-575716	EFXE-575716SB
		AR-202318AL	EFXE-202318AL	SB-577620	EFXE-577620SB
		AR-232811AL	EFXE-232811AL	SB-575730	EFXE-575730SB
		AR-233312AL	EFXE-233312AL	SB-769520	EFXE-769520SB
		AR-233318AL	EFXE-233318AL	SB-1258040	EFXE-1258040SB

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Enclosure types (Stainless steel)	
ST-101210	EFXE-101210ST
ST-151510	EFXE-151510ST
ST-142013	EFXE-142013ST
ST-202010	EFXE-202010ST
ST-202016	EFXE-202016ST
ST-202713	EFXE-202713ST
ST-272713	EFXE-272713ST
ST-203016	EFXE-203016ST
ST-273513	EFXE-273513ST
ST-282816	EFXE-282816ST
ST-204016	EFXE-204016ST
ST-353516	EFXE-353516ST
ST-282827	EFXE-282827ST
ST-355016	EFXE-355016ST
ST-383816	EFXE-383816ST
ST-384516	EFXE-384516ST
ST-385716	EFXE-385716ST
ST-505016	EFXE-505016ST
ST-383827	EFXE-383827ST
ST-575716	EFXE-575716ST
ST-577620	EFXE-577620ST
ST-575730	EFXE-575730ST
ST-769520	EFXE-769520ST
ST-1258040	EFXE-1258040ST

Note 2 For stainless steel enclosures: dimensions (2) and (3) can be decreased or increased up to 20%, dimensions (4) can be increased up to 500 mm. Model name changes consequently.

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Power dissipation – HT glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	3,5	5,2	7,0	7,8	9,6	10,4	11,3	15,2
AQ-080808P-HT	EFE-080808-HT	4,6	6,8	9,1	10,2	12,5	13,7	14,8	19,8
AR-081106P-HT	EFE-081106-HT	4,3	6,4	8,5	9,6	11,8	12,8	13,9	18,6
AR-081108P-HT	EFE-081108-HT	5,6	8,4	11,2	12,6	15,3	16,7	18,1	24,2
AR-081606P-HT	EFE-081606-HT	5,8	8,7	11,6	13,0	15,9	17,4	18,8	25.2
AR-081608P-HT	EFE-081608-HT	6,8	10,2	13,7	15,4	18,8	20,5	22,2	29,7
AR-081906P-HT	EFE-081906-HT	6,4	9,6	12,8	14,4	17,6	19,2	20,8	27,8
AR-081908P-HT	EFE-081908-HT	7,5	11,3	15,1	17,0	20,7	22,6	24,5	32,7
AR-082306P-HT	EFE-082306-HT	7,2	10,8	14,4	16,2	19,8	21,6	23,4	31,3
AR-082308P-HT	EFE-082308-HT	8,5	12,7	16,9	19,0	23,3	25,4	27,5	36,7
AQ-121209P-HT	EFE-121209-HT	8,0	12,0	15,9	17,9	21,9	23,9	25,9	34,7
AR-122209P-HT	EFE-122209-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	47,0
AQ-161609P-HT	EFE-161609-HT	10,4	15,6	20,8	23,4	28,6	31,2	33,8	45,2
AR-162609P-HT	EFE-162609-HT	13,4	20,1	26,8	30,2	36,9	40,2	43,6	58,3
AR-163609P-HT	EFE-163609-HT	16,2	24,3	32,4	36,5	44,6	48,6	52,7	70,5
AR-165609P-HT	EFE-165609-HT	21,4	32,0	42,7	48,1	58,7	64,1	69,4	92,9
AQ-202017P-HT	EFE-202017-HT	18,0	26,9	35,9	40,4	49,4	53,9	58,4	78,1
AR-203017P-HT	EFE-203017-HT	20,9	31,3	41,7	47,0	57,4	62,6	67,8	90,8
AQ-252612P-HT	EFE-252612-HT	18,8	28,2	37,6	42,4	51,8	56,5	61,2	81,9
AQ-252616P-HT	EFE-252616-HT	20,8	31,1	41,5	46,7	57,1	62,3	67,5	90,3
AR-254012P-HT	EFE-254012-HT	22,8	34,2	45,7	51,4	62,8	68,5	74,2	99,3
AR-254016P-HT	EFE-254016-HT	26,2	39,3	52,4	58,9	72,0	78,6	85,1	113,9
AR-256012P-HT	EFE-256012-HT	29,0	43,6	58,1	65,3	79,9	87,1	94,4	126,3
AR-304020P-HT	EFE-304020-HT	32,3	48,5	64,7	72,7	88,9	97,0	105,1	140,7
AQ-363609P-HT	EFE-363609-HT	23,0	34,6	46,1	51,8	63,4	69,1	74,9	100,2
AR-406025P-HT	EFE-406025-HT	50,3	75,5	100,7	113,3	138,4	151,0	163,6	218,9
AQ-414012P-HT	EFE-414012-HT	29,1	43,7	58,2	65,5	80,1	87,3	94,6	126,6
AQ-414020P-HT	EFE-414020-HT	36,6	55,0	73,3	82,4	100,8	109,9	119,1	159,4

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	5,2	6,1	7,8	8,7	9,6	13,4
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	6,8	8,0	10,2	11,4	12,5	17,5
AR-081106P-HT	EFE-081106-HT	2,1	4,3	6,4	7,5	9,6	10,7	11,8	16,5
AR-081108P-HT	EFE-081108-HT	2,8	5,6	8,4	9,8	12,6	13,9	15,3	21.5
AR-081606P-HT	EFE-081606-HT	2,9	5,8	8,7	10,1	13,0	14,5	15,9	22,3
AR-081608P-HT	EFE-081608-HT	3,4	6,8	10,2	11,9	15,4	17,1	18,8	26,3
AR-081906P-HT	EFE-081906-HT	3,2	6,4	9,6	11,2	14,4	16,0	17,6	24,6
AR-081908P-HT	EFE-081908-HT	3,8	7,5	11,3	13,2	17,0	18,8	20,7	29,0
AR-082306P-HT	EFE-082306-HT	3,6	7,2	10,8	12,6	16,2	18,0	19,8	27,7
AR-082308P-HT	EFE-082308-HT	4,2	8,5	12,7	14,8	19,0	21,1	23,3	32,5
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	12,0	14,0	17,9	19,9	21,9	30,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	41,6
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	15,6	18,2	23,4	26,0	28,6	40,0
AR-162609P-HT	EFE-162609-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	51,6
AR-163609P-HT	EFE-163609-HT	8,1	16,2	24,3	28,4	36,5	40,5	44,6	62,3
AR-165609P-HT	EFE-165609-HT	10,7	21,4	32,0	37,4	48,1	53,4	58,7	82,2
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	26,9	31,4	40,4	44,9	49,4	69,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	31,3	36,5	47,0	52,2	57,4	80,4
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	28,2	32,9	42,4	47,1	51,8	72,5
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	31,1	36,3	46,7	51,9	57,1	79,9
AR-254012P-HT	EFE-254012-HT	11,4	22,8	34,2	39,9	51,4	57,1	62,8	87,9
AR-254016P-HT	EFE-254016-HT	13,1	26,2	39,3	45,8	58,9	65,5	72,0	100,8
AR-256012P-HT	EFE-256012-HT	14,5	29,0	43,6	50,8	65,3	72,6	79,9	111,8
AR-304020P-HT	EFE-304020-HT	16,2	32,3	48,5	56,6	72,7	80,8	88,9	124,4
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	34,6	40,3	51,8	57,6	63,4	88,7
AR-406025P-HT	EFE-406025-HT	25,2	50,3	75,5	88,1	113,3	125,8	138,4	193,8
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	43,7	51,0	65,5	72,8	80,1	112,1
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	55,0	64,1	82,4	91,6	100,8	141,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	2,6	4,4	5,2	7,0	7,8	8,7	12,5
AQ-080808P-HT	EFE-080808-HT	2,3	3,4	5,7	6,8	9,1	10,2	11,4	16,2
AR-081106P-HT	EFE-081106-HT	2,1	3,2	5,3	6,4	8,5	9,6	10,7	15,2
AR-081108P-HT	EFE-081108-HT	2,8	4,2	7,0	8,4	11,2	12,6	13,9	19,8
AR-081606P-HT	EFE-081606-HT	2,9	4,3	7,2	8,7	11,6	13,0	14,5	20,6
AR-081608P-HT	EFE-081608-HT	3,4	5,1	8,5	10,2	13,7	15,4	17,1	24,3
AR-081906P-HT	EFE-081906-HT	3,2	4,8	8,0	9,6	12,8	14,4	16,0	22,8
AR-081908P-HT	EFE-081908-HT	3,8	5,7	9,4	11,3	15,1	17,0	18,8	26,8
AR-082306P-HT	EFE-082306-HT	3,6	5,4	9,0	10,8	14,4	16,2	18,0	25,6
AR-082308P-HT	EFE-082308-HT	4,2	6,3	10,6	12,7	16,9	19,0	21,1	30,0
AQ-121209P-HT	EFE-121209-HT	4,0	6,0	10,0	12,0	15,9	17,9	19,9	28,3
AR-122209P-HT	EFE-122209-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	38,3
AQ-161609P-HT	EFE-161609-HT	5,2	7,8	13,0	15,6	20,8	23,4	26,0	36,9
AR-162609P-HT	EFE-162609-HT	6,7	10,1	16,8	20,1	26,8	30,2	33,5	47,6
AR-163609P-HT	EFE-163609-HT	8,1	12,2	20,3	24,3	32,4	36,5	40,5	57,5
AR-165609P-HT	EFE-165609-HT	10,7	16,0	26,7	32,0	42,7	48,1	53,4	75,8
AQ-202017P-HT	EFE-202017-HT	9,0	13,5	22,4	26,9	35,9	40,4	44,9	63,7
AR-203017P-HT	EFE-203017-HT	10,4	15,7	26,1	31,3	41,7	47,0	52,2	74,0
AQ-252612P-HT	EFE-252612-HT	9,4	14,1	23,5	28,2	37,6	42,4	47,1	66,8
AQ-252616P-HT	EFE-252616-HT	10,4	15,6	26,0	31,1	41,5	46,7	51,9	73,7
AR-254012P-HT	EFE-254012-HT	11,4	17,1	28,5	34,2	45,7	51,4	57,1	81,0
AR-254016P-HT	EFE-254016-HT	13,1	19,6	32,7	39,3	52,4	58,9	65,5	92,9
AR-256012P-HT	EFE-256012-HT	14,5	21,8	36,3	43,6	58,1	65,3	72,6	103,0
AR-304020P-HT	EFE-304020-HT	16,2	24,2	40,4	48,5	64,7	72,7	80,8	114,7
AQ-363609P-HT	EFE-363609-HT	11,5	17,3	28,8	34,6	46,1	51,8	57,6	81,8
AR-406025P-HT	EFE-406025-HT	25,2	37,8	62,9	75,5	100,7	113,3	125,8	178,6
AQ-414012P-HT	EFE-414012-HT	14,6	21,8	36,4	43,7	58,2	65,5	72,8	103,0
AQ-414020P-HT	EFE-414020-HT	18,3	27,5	45,8	55,0	73,3	82,4	91,6	130,0

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	1,7	3,5	4,4	6,1	7,0	7,8	11,7
AQ-080808P-HT	EFE-080808-HT	2,3	4,6	5,7	8,0	9,1	10,2	15,2
AR-081106P-HT	EFE-081106-HT	2,1	4,3	5,3	7,5	8,5	9,6	14,3
AR-081108P-HT	EFE-081108-HT	2,8	5,6	7,0	9,8	11,2	12,6	18,7
AR-081606P-HT	EFE-081606-HT	2,9	5,8	7,2	10,1	11,6	13,0	19,4
AR-081608P-HT	EFE-081608-HT	3,4	6,8	8,5	11,9	13,7	15,4	22,9
AR-081906P-HT	EFE-081906-HT	3,2	6,4	8,0	11,2	12,8	14,4	21,4
AR-081908P-HT	EFE-081908-HT	3,8	7,5	9,4	13,2	15,1	17,0	25,3
AR-082306P-HT	EFE-082306-HT	3,6	7,2	9,0	12,6	14,4	16,2	24,1
AR-082308P-HT	EFE-082308-HT	4,2	8,5	10,6	14,8	16,9	19,0	28,3
AQ-121209P-HT	EFE-121209-HT	4,0	8,0	10,0	14,0	15,9	17,9	26,7
AR-122209P-HT	EFE-122209-HT	5,4	10,8	13,5	18,9	21,6	24,3	36,2
AQ-161609P-HT	EFE-161609-HT	5,2	10,4	13,0	18,2	20,8	23,4	34,8
AR-162609P-HT	EFE-162609-HT	6,7	13,4	16,8	23,5	26,8	30,2	44,9
AR-163609P-HT	EFE-163609-HT	8,1	16,2	20,3	28,4	32,4	36,5	54,2
AR-165609P-HT	EFE-165609-HT	10,7	21,4	26,7	37,4	42,7	48,1	71,5
AQ-202017P-HT	EFE-202017-HT	9,0	18,0	22,4	31,4	35,9	40,4	60,1
AR-203017P-HT	EFE-203017-HT	10,4	20,9	26,1	36,5	41,7	47,0	69,9
AQ-252612P-HT	EFE-252612-HT	9,4	18,8	23,5	32,9	37,6	42,4	63,0
AQ-252616P-HT	EFE-252616-HT	10,4	20,8	26,0	36,3	41,5	46,7	69,5
AR-254012P-HT	EFE-254012-HT	11,4	22,8	28,5	39,9	45,7	51,4	76,5
AR-254016P-HT	EFE-254016-HT	13,1	26,2	32,7	45,8	52,4	58,9	87,7
AR-256012P-HT	EFE-256012-HT	14,5	29,0	36,3	50,8	58,1	65,3	97,2
AR-304020P-HT	EFE-304020-HT	16,2	32,3	40,4	56,6	64,7	72,7	108,3
AQ-363609P-HT	EFE-363609-HT	11,5	23,0	28,8	40,3	46,1	51,8	77,1
AR-406025P-HT	EFE-406025-HT	25,2	50,3	62,9	88,1	100,7	113,3	168,7
AQ-414012P-HT	EFE-414012-HT	14,6	29,1	36,4	51,0	58,2	65,5	97,5
AQ-414020P-HT	EFE-414020-HT	18,3	36,6	45,8	64,1	73,3	82,4	122,7

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Enclosure types (polyester)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.127°C (T4/T135°C)
AQ-080806P-HT	EFE-080806-HT	0,9	1,7	5,6
AQ-080808P-HT	EFE-080808-HT	1,1	2,3	7,3
AR-081106P-HT	EFE-081106-HT	1,1	2,1	6,5
AR-081108P-HT	EFE-081108-HT	1,4	2,8	9,0
AR-081606P-HT	EFE-081606-HT	1,4	2,9	9,2
AR-081608P-HT	EFE-081608-HT	1,7	3,4	10,9
AR-081906P-HT	EFE-081906-HT	1,6	3,2	10,2
AR-081908P-HT	EFE-081908-HT	1,9	3,8	12,1
AR-082306P-HT	EFE-082306-HT	1,8	3,6	11,5
AR-082308P-HT	EFE-082308-HT	2,1	4,2	13,5
AQ-121209P-HT	EFE-121209-HT	2,0	4,0	12,8
AR-122209P-HT	EFE-122209-HT	2,7	5,4	17,3
AQ-161609P-HT	EFE-161609-HT	2,6	5,2	16,6
AR-162609P-HT	EFE-162609-HT	3,4	6,7	21,5
AR-163609P-HT	EFE-163609-HT	4,1	8,1	26,0
AR-165609P-HT	EFE-165609-HT	5,3	10,7	34,2
AQ-202017P-HT	EFE-202017-HT	4,5	9,0	28,7
AR-203017P-HT	EFE-203017-HT	5,2	10,4	33,4
AQ-252612P-HT	EFE-252612-HT	4,7	9,4	30,1
AQ-252616P-HT	EFE-252616-HT	5,2	10,4	33,2
AR-254012P-HT	EFE-254012-HT	5,7	11,4	36,5
AR-254016P-HT	EFE-254016-HT	6,5	13,1	41,9
AR-256012P-HT	EFE-256012-HT	7,3	14,5	46,4
AR-304020P-HT	EFE-304020-HT	8,1	16,2	51,8
AQ-363609P-HT	EFE-363609-HT	5,8	11,5	36,8
AR-406025P-HT	EFE-406025-HT	12,6	25,2	80,6
AQ-414012P-HT	EFE-414012-HT	7,3	14,6	46,6
AQ-414020P-HT	EFE-414020-HT	9,2	18,3	58,6

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Power dissipation – HT aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	5,2	7,8	10,4	11,7	14,3	15,6	16,9	23,4
AR-081306AL-HT	EFXE-081306AL-HT	7,0	10,6	14,1	15,9	19,4	21,2	23,0	31,8
AR-081806AL-HT	EFXE-081806AL-HT	8,9	13,3	17,8	20,0	24,5	26,7	28,9	40,0
AR-082505AL-HT	EFXE-082505AL-HT	10,9	16,4	21,9	24,7	30,1	32,9	35,6	49,4
AQ-101008AL-HT	EFXE-101008AL-HT	8,7	13,0	17,4	19,6	23,9	26,1	28,3	39,2
AR-101608AL-HT	EFXE-101608AL-HT	11,5	17,3	23,1	26,0	31,8	34,7	37,6	52,0
AR-102008AL-HT	EFXE-102008AL-HT	13,4	20,1	26,8	30,2	36,9	40,3	43,6	60,4
AQ-121208AL-HT	EFXE-121208AL-HT	10,8	16,2	21,6	24,3	29,7	32,4	35,1	48,6
AQ-121209AL-HT	EFXE-121209AL-HT	11,6	17,5	23,3	26,2	32,1	35,0	37,9	52,5
AR-122208AL-HT	EFXE-122208AL-HT	15,6	23,5	31,3	35,3	43,1	47,0	50,9	70,6
AR-122209AL-HT	EFXE-122209AL-HT	16,8	25,3	33,7	37,9	46,3	50,6	54,8	75,9
AR-123608AL-HT	EFXE-123608AL-HT	22,3	33,5	44,7	50,3	61,5	67,1	72,7	100,7
AQ-141409AL-HT	EFXE-141409AL-HT	13,7	20,6	27,5	31,0	37,9	41,3	44,8	62,0
AR-142009AL-HT	EFXE-142009AL-HT	17,1	25,7	34,2	38,5	47,1	51,4	55,7	77,1
AQ-161609AL-HT	EFXE-161609AL-HT	16,1	24,1	32,2	36,2	44,2	48,3	52,3	72,4
AR-162609AL-HT	EFXE-162609AL-HT	21,9	32,8	43,8	49,3	60,2	65,7	71,2	98,6
AR-163609AL-HT	EFXE-163609AL-HT	27,5	41,3	55,1	62,0	75,7	82,6	89,5	124,0
AR-165609AL-HT	EFXE-165609AL-HT	38,4	57,7	76,9	86,6	105,8	115,4	125,0	173,2
AQ-181810AL-HT	EFXE-181810AL-HT	19,7	29,6	39,5	44,4	54,3	59,2	64,2	88,8
AR-182810AL-HT	EFXE-182810AL-HT	26,1	39,1	52,2	58,7	71,8	78,3	84,8	117,5
AR-102311AL-HT	EFXE-102311AL-HT	18,2	27,3	36,5	41,0	50,1	54,7	59,3	82,1
AR-202311AL-HT	EFXE-202311AL-HT	26,1	39,1	52,2	58,7	71,7	78,3	84,8	117,4
AR-202318AL-HT	EFXE-202318AL-HT	35,9	53,9	71,8	80,8	98,8	107,8	116,8	161,7
AR-232811AL-HT	EFXE-232811AL-HT	31,6	47,5	63,3	71,3	87,1	95,0	103,0	142,6
AR-233311AL-HT	EFXE-233311AL-HT	35,3	52,9	70,6	79,4	97,0	105,9	114,7	158,8
AR-233318AL-HT	EFXE-233318AL-HT	47,5	71,3	95,1	107,0	130,8	142,7	154,6	214,1
AR-234011AL-HT	EFXE-234011AL-HT	40,2	60,4	80,5	90,6	110,7	120,8	130,9	181,2
AR-234023AL-HT	EFXE-234023AL-HT	62,2	93,3	124,5	140,0	171,2	186,7	202,3	280,1
AR-236011AL-HT	EFXE-236011AL-HT	54,1	81,2	108,3	121,9	148,9	162,5	176,0	243,8
AR-314011AL-HT	EFXE-314011AL-HT	48,6	72,9	97,2	109,3	133,6	145,8	157,9	218,7
AR-314014AL-HT	EFXE-314014AL-HT	54,9	82,4	109,9	123,7	151,2	164,9	178,7	247,4
AR-314018AL-HT	EFXE-314018AL-HT	63,8	95,7	127,6	143,5	175,4	191,4	207,3	287,1
AR-314023AL-HT	EFXE-314023AL-HT	73,5	110,3	147,1	165,5	202,3	220,7	239,1	331,0
AR-316011AL-HT	EFXE-316011AL-HT	64,0	96,0	128,1	144,1	176,1	192,1	208,1	288,2
AR-316018AL-HT	EFXE-316018AL-HT	82,7	124,1	165,5	186,2	227,6	248,3	268,9	372,4
AQ-606020AL-HT	EFXE-606020AL-HT	129,1	193,7	258,3	290,5	355,1	387,4	419,7	581,1

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C							
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	7,8	9,1	11,7	13,0	14,3	20,8
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	10,6	12,3	15,9	17,7	19,4	28,3
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	13,3	15,5	20,0	22,2	24,5	35,6
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	16,4	19,2	24,7	27,4	30,1	43,9
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	13,0	15,2	19,6	21,7	23,9	34,8
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	17,3	20,2	26,0	28,9	31,8	46,2
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	20,1	23,5	30,2	33,5	36,9	53,7
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	16,2	18,9	24,3	27,0	29,7	43,2
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	17,5	20,4	26,2	29,2	32,1	46,7
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	23,5	27,4	35,3	39,2	43,1	62,7
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	25,3	29,5	37,9	42,1	46,3	67,4
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	33,5	39,1	50,3	55,9	61,5	89,5
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	20,6	24,1	31,0	34,4	37,9	55,1
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	25,7	30,0	38,5	42,8	47,1	68,5
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	24,1	28,1	36,2	40,2	44,2	64,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	32,8	38,3	49,3	54,8	60,2	87,6
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	41,3	48,2	62,0	68,9	75,7	110,2
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	57,7	67,3	86,6	96,2	105,8	153,9
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	29,6	34,5	44,4	49,3	54,3	79,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	39,1	45,7	58,7	65,2	71,8	104,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	27,3	31,9	41,0	45,6	50,1	73,0
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	39,1	45,6	58,7	65,2	71,7	104,4
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	53,9	62,8	80,8	89,8	98,8	143,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	47,5	55,4	71,3	79,2	87,1	126,7
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	52,9	61,7	79,4	88,2	97,0	141,2
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	71,3	83,2	107,0	118,9	130,8	190,3
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	60,4	70,5	90,6	100,7	110,7	161,1
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	93,3	108,9	140,0	155,6	171,2	249,0
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	81,2	94,8	121,9	135,4	148,9	216,7
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	72,9	85,0	109,3	121,5	133,6	194,4
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	82,4	96,2	123,7	137,4	151,2	219,9
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	95,7	111,6	143,5	159,5	175,4	255,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	110,3	128,7	165,5	183,9	202,3	294,2
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	96,0	112,0	144,1	160,1	176,1	256,2
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	124,1	144,8	186,2	206,9	227,6	331,0
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	193,7	226,0	290,5	322,8	355,1	516,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C							
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	3,9	6,5	7,8	10,4	11,7	13,0	19,5
AR-081306AL-HT	EFXE-081306AL-HT	3,5	5,3	8,8	10,6	14,1	15,9	17,7	26,5
AR-081806AL-HT	EFXE-081806AL-HT	4,4	6,6	11,1	13,3	17,8	20,0	22,2	33,4
AR-082505AL-HT	EFXE-082505AL-HT	5,4	8,2	13,7	16,4	21,9	24,7	27,4	41,1
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	6,5	10,8	13,0	17,4	19,6	21,7	32,6
AR-101608AL-HT	EFXE-101608AL-HT	5,7	8,6	14,4	17,3	23,1	26,0	28,9	43,3
AR-102008AL-HT	EFXE-102008AL-HT	6,7	10,0	16,7	20,1	26,8	30,2	33,5	50,3
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	8,1	13,5	16,2	21,6	24,3	27,0	40,5
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	8,7	14,6	17,5	23,3	26,2	29,2	43,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	11,7	19,6	23,5	31,3	35,3	39,2	58,8
AR-122209AL-HT	EFXE-122209AL-HT	8,4	12,6	21,0	25,3	33,7	37,9	42,1	63,2
AR-123608AL-HT	EFXE-123608AL-HT	11,1	16,7	27,9	33,5	44,7	50,3	55,9	83,9
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	10,3	17,2	20,6	27,5	31,0	34,4	51,7
AR-142009AL-HT	EFXE-142009AL-HT	8,5	12,8	21,4	25,7	34,2	38,5	42,8	64,3
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	12,0	20,1	24,1	32,2	36,2	40,2	60,4
AR-162609AL-HT	EFXE-162609AL-HT	10,9	16,4	27,4	32,8	43,8	49,3	54,8	82,2
AR-163609AL-HT	EFXE-163609AL-HT	13,7	20,6	34,4	41,3	55,1	62,0	68,9	103,3
AR-165609AL-HT	EFXE-165609AL-HT	19,2	28,8	48,1	57,7	76,9	86,6	96,2	144,3
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	14,8	24,6	29,6	39,5	44,4	49,3	74,0
AR-182810AL-HT	EFXE-182810AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-102311AL-HT	EFXE-102311AL-HT	9,1	13,6	22,8	27,3	36,5	41,0	45,6	68,4
AR-202311AL-HT	EFXE-202311AL-HT	13,0	19,5	32,6	39,1	52,2	58,7	65,2	97,9
AR-202318AL-HT	EFXE-202318AL-HT	17,9	26,9	44,9	53,9	71,8	80,8	89,8	134,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	23,7	39,6	47,5	63,3	71,3	79,2	118,8
AR-233311AL-HT	EFXE-233311AL-HT	17,6	26,4	44,1	52,9	70,6	79,4	88,2	132,3
AR-233318AL-HT	EFXE-233318AL-HT	23,7	35,6	59,4	71,3	95,1	107,0	118,9	178,4
AR-234011AL-HT	EFXE-234011AL-HT	20,1	30,2	50,3	60,4	80,5	90,6	100,7	151,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	46,6	77,8	93,3	124,5	140,0	155,6	233,4
AR-236011AL-HT	EFXE-236011AL-HT	27,0	40,6	67,7	81,2	108,3	121,9	135,4	203,1
AR-314011AL-HT	EFXE-314011AL-HT	24,3	36,4	60,7	72,9	97,2	109,3	121,5	182,3
AR-314014AL-HT	EFXE-314014AL-HT	27,4	41,2	68,7	82,4	109,9	123,7	137,4	206,2
AR-314018AL-HT	EFXE-314018AL-HT	31,9	47,8	79,7	95,7	127,6	143,5	159,5	239,2
AR-314023AL-HT	EFXE-314023AL-HT	36,7	55,1	91,9	110,3	147,1	165,5	183,9	275,8
AR-316011AL-HT	EFXE-316011AL-HT	32,0	48,0	80,0	96,0	128,1	144,1	160,1	240,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	62,0	103,4	124,1	165,5	186,2	206,9	310,3
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	96,8	161,4	193,7	258,3	290,5	322,8	484,3

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C						
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	2,6	5,2	6,5	9,1	10,4	11,7	18,2
AR-081306AL-HT	EFXE-081306AL-HT	3,5	7,0	8,8	12,3	14,1	15,9	24,7
AR-081806AL-HT	EFXE-081806AL-HT	4,4	8,9	11,1	15,5	17,8	20,0	31,1
AR-082505AL-HT	EFXE-082505AL-HT	5,4	10,9	13,7	19,2	21,9	24,7	38,4
AQ-101008AL-HT	EFXE-101008AL-HT	4,3	8,7	10,8	15,2	17,4	19,6	30,4
AR-101608AL-HT	EFXE-101608AL-HT	5,7	11,5	14,4	20,2	23,1	26,0	40,5
AR-102008AL-HT	EFXE-102008AL-HT	6,7	13,4	16,7	23,5	26,8	30,2	47,0
AQ-121208AL-HT	EFXE-121208AL-HT	5,4	10,8	13,5	18,9	21,6	24,3	37,8
AQ-121209AL-HT	EFXE-121209AL-HT	5,8	11,6	14,6	20,4	23,3	26,2	40,8
AR-122208AL-HT	EFXE-122208AL-HT	7,8	15,6	19,6	27,4	31,3	35,3	54,9
AR-122209AL-HT	EFXE-122209AL-HT	8,4	16,8	21,0	29,5	33,7	37,9	59,0
AR-123608AL-HT	EFXE-123608AL-HT	11,1	22,3	27,9	39,1	44,7	50,3	78,3
AQ-141409AL-HT	EFXE-141409AL-HT	6,8	13,7	17,2	24,1	27,5	31,0	48,2
AR-142009AL-HT	EFXE-142009AL-HT	8,5	17,1	21,4	30,0	34,2	38,5	60,0
AQ-161609AL-HT	EFXE-161609AL-HT	8,0	16,1	20,1	28,1	32,2	36,2	56,3
AR-162609AL-HT	EFXE-162609AL-HT	10,9	21,9	27,4	38,3	43,8	49,3	76,7
AR-163609AL-HT	EFXE-163609AL-HT	13,7	27,5	34,4	48,2	55,1	62,0	96,4
AR-165609AL-HT	EFXE-165609AL-HT	19,2	38,4	48,1	67,3	76,9	86,6	134,7
AQ-181810AL-HT	EFXE-181810AL-HT	9,8	19,7	24,6	34,5	39,5	44,4	69,1
AR-182810AL-HT	EFXE-182810AL-HT	13,0	26,1	32,6	45,7	52,2	58,7	91,4
AR-102311AL-HT	EFXE-102311AL-HT	9,1	18,2	22,8	31,9	36,5	41,0	63,8
AR-202311AL-HT	EFXE-202311AL-HT	13,0	26,1	32,6	45,6	52,2	58,7	91,3
AR-202318AL-HT	EFXE-202318AL-HT	17,9	35,9	44,9	62,8	71,8	80,8	125,7
AR-232811AL-HT	EFXE-232811AL-HT	15,8	31,6	39,6	55,4	63,3	71,3	110,9
AR-233311AL-HT	EFXE-233311AL-HT	17,6	35,3	44,1	61,7	70,6	79,4	123,5
AR-233318AL-HT	EFXE-233318AL-HT	23,7	47,5	59,4	83,2	95,1	107,0	166,5
AR-234011AL-HT	EFXE-234011AL-HT	20,1	40,2	50,3	70,5	80,5	90,6	141,0
AR-234023AL-HT	EFXE-234023AL-HT	31,1	62,2	77,8	108,9	124,5	140,0	217,9
AR-236011AL-HT	EFXE-236011AL-HT	27,0	54,1	67,7	94,8	108,3	121,9	189,6
AR-314011AL-HT	EFXE-314011AL-HT	24,3	48,6	60,7	85,0	97,2	109,3	170,1
AR-314014AL-HT	EFXE-314014AL-HT	27,4	54,9	68,7	96,2	109,9	123,7	192,4
AR-314018AL-HT	EFXE-314018AL-HT	31,9	63,8	79,7	111,6	127,6	143,5	223,3
AR-314023AL-HT	EFXE-314023AL-HT	36,7	73,5	91,9	128,7	147,1	165,5	257,4
AR-316011AL-HT	EFXE-316011AL-HT	32,0	64,0	80,0	112,0	128,1	144,1	224,1
AR-316018AL-HT	EFXE-316018AL-HT	41,3	82,7	103,4	144,8	165,5	186,2	289,6
AQ-606020AL-HT	EFXE-606020AL-HT	64,5	129,1	161,4	226,0	258,3	290,5	452,0

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Enclosure types (aluminium)		Maximum power dissipation (W) Tamb. up to **95**°C		
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)	INTERNAL TEMP.130°C (T4/T135°C)
AQ-080806AL-HT	EFXE-080806AL-HT	1,3	2,6	9,1
AR-081306AL-HT	EFXE-081306AL-HT	1,7	3,5	12,3
AR-081806AL-HT	EFXE-081806AL-HT	2,2	4,4	15,5
AR-082505AL-HT	EFXE-082505AL-HT	2,7	5,4	19,2
AQ-101008AL-HT	EFXE-101008AL-HT	2,1	4,3	15,2
AR-101608AL-HT	EFXE-101608AL-HT	2,8	5,7	20,2
AR-102008AL-HT	EFXE-102008AL-HT	3,3	6,7	23,5
AQ-121208AL-HT	EFXE-121208AL-HT	2,7	5,4	18,9
AQ-121209AL-HT	EFXE-121209AL-HT	2,9	5,8	20,4
AR-122208AL-HT	EFXE-122208AL-HT	3,9	7,8	27,4
AR-122209AL-HT	EFXE-122209AL-HT	4,2	8,4	29,5
AR-123608AL-HT	EFXE-123608AL-HT	5,5	11,1	39,1
AQ-141409AL-HT	EFXE-141409AL-HT	3,4	6,8	24,1
AR-142009AL-HT	EFXE-142009AL-HT	4,2	8,5	30,0
AQ-161609AL-HT	EFXE-161609AL-HT	4,0	8,0	28,1
AR-162609AL-HT	EFXE-162609AL-HT	5,4	10,9	38,3
AR-163609AL-HT	EFXE-163609AL-HT	6,8	13,7	48,2
AR-165609AL-HT	EFXE-165609AL-HT	9,6	19,2	67,3
AQ-181810AL-HT	EFXE-181810AL-HT	4,9	9,8	34,5
AR-182810AL-HT	EFXE-182810AL-HT	6,5	13,0	45,7
AR-102311AL-HT	EFXE-102311AL-HT	4,5	9,1	31,9
AR-202311AL-HT	EFXE-202311AL-HT	6,5	13,0	45,6
AR-202318AL-HT	EFXE-202318AL-HT	8,9	17,9	62,8
AR-232811AL-HT	EFXE-232811AL-HT	7,9	15,8	55,4
AR-233311AL-HT	EFXE-233311AL-HT	8,8	17,6	61,7
AR-233318AL-HT	EFXE-233318AL-HT	11,8	23,7	83,2
AR-234011AL-HT	EFXE-234011AL-HT	10,0	20,1	70,5
AR-234023AL-HT	EFXE-234023AL-HT	15,5	31,1	108,9
AR-236011AL-HT	EFXE-236011AL-HT	13,5	27,0	94,8
AR-314011AL-HT	EFXE-314011AL-HT	12,1	24,3	85,0
AR-314014AL-HT	EFXE-314014AL-HT	13,7	27,4	96,2
AR-314018AL-HT	EFXE-314018AL-HT	15,9	31,9	111,6
AR-314023AL-HT	EFXE-314023AL-HT	18,3	36,7	128,7
AR-316011AL-HT	EFXE-316011AL-HT	16,0	32,0	112,0
AR-316018AL-HT	EFXE-316018AL-HT	20,6	41,3	144,8
AQ-606020AL-HT	EFXE-606020AL-HT	32,2	64,5	226,0

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Power dissipation – Glass fiber reinforced polyester resin enclosures

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	3,4	5,2	6,9	7,8	9,5	10,4	11,3
AQ-080808P	EFE-080808	4,5	6,8	9,1	10,2	12,5	13,6	14,7
AR-081106P	EFE-081106	4,2	6,4	8,5	9,6	11,7	12,8	13,8
AR-081606P	EFE-081606	5,7	8,6	11,5	13,0	15,9	17,3	18,8
AR-081906P	EFE-081906	6,4	9,6	12,8	14,4	17,6	19,2	20,8
AQ-121209P	EFE-121209	7,9	11,9	15,9	17,9	21,9	23,9	25,9
AR-122209P	EFE-122209	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AQ-161609P	EFE-161609	10,3	15,5	20,7	23,3	28,5	31,1	33,7
AR-162609P	EFE-162609	13,4	20,1	26,8	30,1	36,8	40,2	43,5
AR-163609P	EFE-163609	16,2	24,3	32,4	36,4	44,5	48,6	52,6
AQ-252612P	EFE-252612	18,8	28,2	37,6	42,3	51,7	56,4	61,1
AQ-252616P	EFE-252616	21,7	32,6	43,5	49,0	59,9	65,3	70,8
AR-254012P	EFE-254012	23,9	35,9	47,9	53,9	65,9	71,8	77,8
AR-254016P	EFE-254016	27,4	41,2	54,9	61,8	75,6	82,4	89,3
AR-256012P	EFE-256012	29,0	43,5	58,0	65,3	79,8	87,1	94,3
AQ-414012P	EFE-414012	29,1	43,6	58,2	65,5	80,0	87,3	94,6
AQ-414016P	EFE-414016	32,9	49,4	65,9	74,1	90,6	98,8	107,0

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	5,2	6,0	7,8	8,7	9,5
AQ-080808P	EFE-080808	2,2	4,5	6,8	7,9	10,2	11,3	12,5
AR-081106P	EFE-081106	2,1	4,2	6,4	7,4	9,6	10,6	11,7
AR-081606P	EFE-081606	2,8	5,7	8,6	10,1	13,0	14,4	15,9
AR-081906P	EFE-081906	3,2	6,4	9,6	11,2	14,4	16,0	17,6
AQ-121209P	EFE-121209	3,9	7,9	11,9	13,9	17,9	19,9	21,9
AR-122209P	EFE-122209	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AQ-161609P	EFE-161609	5,1	10,3	15,5	18,1	23,3	25,9	28,5
AR-162609P	EFE-162609	6,7	13,4	20,1	23,4	30,1	33,5	36,8
AR-163609P	EFE-163609	8,1	16,2	24,3	28,3	36,4	40,5	44,5
AQ-252612P	EFE-252612	9,4	18,8	28,2	32,9	42,3	47,0	51,7
AQ-252616P	EFE-252616	10,8	21,7	32,6	38,1	49,0	54,4	59,9
AR-254012P	EFE-254012	11,9	23,9	35,9	41,9	53,9	59,9	65,9
AR-254016P	EFE-254016	13,7	27,4	41,2	48,1	61,8	68,7	75,6
AR-256012P	EFE-256012	14,5	29,0	43,5	50,8	65,3	72,6	79,8
AQ-414012P	EFE-414012	14,5	29,1	43,6	50,9	65,5	72,7	80,0
AQ-414016P	EFE-414016	16,4	32,9	49,4	57,6	74,1	82,3	90,6

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	2,6	4,3	5,2	6,9	7,8	8,7
AQ-080808P	EFE-080808	2,2	3,4	5,6	6,8	9,1	10,2	11,3
AR-081106P	EFE-081106	2,1	3,2	5,3	6,4	8,5	9,6	10,6
AR-081606P	EFE-081606	2,8	4,3	7,2	8,6	11,5	13,0	14,4
AR-081906P	EFE-081906	3,2	4,8	8,0	9,6	12,8	14,4	16,0
AQ-121209P	EFE-121209	3,9	5,9	9,9	11,9	15,9	17,9	19,9
AR-122209P	EFE-122209	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AQ-161609P	EFE-161609	5,1	7,7	12,9	15,5	20,7	23,3	25,9
AR-162609P	EFE-162609	6,7	10,0	16,7	20,1	26,8	30,1	33,5
AR-163609P	EFE-163609	8,1	12,1	20,2	24,3	32,4	36,4	40,5
AQ-252612P	EFE-252612	9,4	14,1	23,5	28,2	37,6	42,3	47,0
AQ-252616P	EFE-252616	10,8	16,3	27,2	32,6	43,5	49,0	54,4
AR-254012P	EFE-254012	11,9	17,9	29,9	35,9	47,9	53,9	59,9
AR-254016P	EFE-254016	13,7	20,6	34,3	41,2	54,9	61,8	68,7
AR-256012P	EFE-256012	14,5	21,7	36,3	43,5	58,0	65,3	72,6
AQ-414012P	EFE-414012	14,5	21,8	36,3	43,6	58,2	65,5	72,7
AQ-414016P	EFE-414016	16,4	24,7	41,1	49,4	65,9	74,1	82,3

Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	1,7	3,4	4,3	6,0	6,9	7,8
AQ-080808P	EFE-080808	2,2	4,5	5,6	7,9	9,1	10,2
AR-081106P	EFE-081106	2,1	4,2	5,3	7,4	8,5	9,6
AR-081606P	EFE-081606	2,8	5,7	7,2	10,1	11,5	13,0
AR-081906P	EFE-081906	3,2	6,4	8,0	11,2	12,8	14,4
AQ-121209P	EFE-121209	3,9	7,9	9,9	13,9	15,9	17,9
AR-122209P	EFE-122209	5,4	10,8	13,5	18,9	21,6	24,3
AQ-161609P	EFE-161609	5,1	10,3	12,9	18,1	20,7	23,3
AR-162609P	EFE-162609	6,7	13,4	16,7	23,4	26,8	30,1
AR-163609P	EFE-163609	8,1	16,2	20,2	28,3	32,4	36,4
AQ-252612P	EFE-252612	9,4	18,8	23,5	32,9	37,6	42,3
AQ-252616P	EFE-252616	10,8	21,7	27,2	38,1	43,5	49,0
AR-254012P	EFE-254012	11,9	23,9	29,9	41,9	47,9	53,9
AR-254016P	EFE-254016	13,7	27,4	34,3	48,1	54,9	61,8
AR-256012P	EFE-256012	14,5	29,0	36,3	50,8	58,0	65,3
AQ-414012P	EFE-414012	14,5	29,1	36,3	50,9	58,2	65,5
AQ-414016P	EFE-414016	16,4	32,9	41,1	57,6	65,9	74,1

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Enclosure types (polyester)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806P	EFE-080806	0,8	1,7
AQ-080808P	EFE-080808	1,1	2,2
AR-081106P	EFE-081106	1,0	2,1
AR-081606P	EFE-081606	1,4	2,8
AR-081906P	EFE-081906	1,6	3,2
AQ-121209P	EFE-121209	1,9	3,9
AR-122209P	EFE-122209	2,7	5,4
AQ-161609P	EFE-161609	2,5	5,1
AR-162609P	EFE-162609	3,3	6,7
AR-163609P	EFE-163609	4,0	8,1
AQ-252612P	EFE-252612	4,7	9,4
AQ-252616P	EFE-252616	5,4	10,8
AR-254012P	EFE-254012	5,9	11,9
AR-254016P	EFE-254016	6,8	13,7
AR-256012P	EFE-256012	7,2	14,5
AQ-414012P	EFE-414012	7,2	14,5
AQ-414016P	EFE-414016	8,2	16,4

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Power dissipation – Aluminum alloy enclosures

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	5,2	7,8	10,4	11,7	14,3	15,6	16,9
AR-081306AL	EFXE-081306AL	7,0	10,6	14,1	15,9	19,4	21,2	23,0
AR-081806AL	EFXE-081806AL	8,9	13,3	17,8	20,0	24,5	26,7	28,9
AR-081808AL	EFXE-081808AL	11,0	16,5	22,1	24,8	30,4	33,1	35,9
AR-082505AL	EFXE-082505AL	10,7	16,1	21,4	24,1	29,5	32,2	34,8
AR-082508AL	EFXE-082508AL	14,2	21,4	28,5	32,1	39,2	42,8	46,4
AQ-101008AL	EFXE-101008AL	8,7	13,0	17,4	19,6	23,9	26,1	28,3
AR-101508AL	EFXE-101508AL	11,1	16,6	22,2	24,9	30,5	33,3	36,0
AR-101608AL	EFXE-101608AL	11,5	17,3	23,1	26,0	31,8	34,7	37,6
AR-102008AL	EFXE-102008AL	13,4	20,1	26,8	30,2	36,9	40,3	43,6
AQ-121208AL	EFXE-121208AL	10,8	16,2	21,6	24,3	29,7	32,4	35,1
AR-122209AL	EFXE-122209AL	16,8	25,3	33,7	37,9	46,3	50,6	54,8
AQ-141409AL	EFXE-141409AL	13,7	20,6	27,5	31,0	37,9	41,3	44,8
AR-142009AL	EFXE-142009AL	17,1	25,7	34,2	38,5	47,1	51,4	55,7
AQ-161609AL	EFXE-161609AL	17,2	25,8	34,4	38,7	47,3	51,6	55,9
AR-162410AL	EFXE-162410AL	22,1	33,1	44,2	49,7	60,8	66,3	71,8
AR-162609AL	EFXE-162609AL	21,9	32,8	43,8	49,3	60,2	65,7	71,2
AQ-181810AL	EFXE-181810AL	19,7	29,6	39,5	44,4	54,3	59,2	64,2
AR-182810AL	EFXE-182810AL	26,1	39,1	52,2	58,7	71,8	78,3	84,8
AR-202311AL	EFXE-202311AL	25,8	38,7	51,6	58,0	71,0	77,4	83,9
AR-202318AL	EFXE-202318AL	35,5	53,3	71,1	80,0	97,8	106,7	115,6
AR-232811AL	EFXE-232811AL	31,6	47,5	63,3	71,3	87,1	95,0	103,0
AR-233312AL	EFXE-233312AL	37,0	55,6	74,1	83,4	101,9	111,2	120,5
AR-233318AL	EFXE-233318AL	47,5	71,3	95,1	107,0	130,8	142,7	154,6

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	7,8	9,1	11,7	13,0	14,3
AR-081306AL	EFXE-081306AL	3,5	7,0	10,6	12,3	15,9	17,7	19,4
AR-081806AL	EFXE-081806AL	4,4	8,9	13,3	15,5	20,0	22,2	24,5
AR-081808AL	EFXE-081808AL	5,5	11,0	16,5	19,3	24,8	27,6	30,4
AR-082505AL	EFXE-082505AL	5,3	10,7	16,1	18,7	24,1	26,8	29,5
AR-082508AL	EFXE-082508AL	7,1	14,2	21,4	24,9	32,1	35,7	39,2
AQ-101008AL	EFXE-101008AL	4,3	8,7	13,0	15,2	19,6	21,7	23,9
AR-101508AL	EFXE-101508AL	5,5	11,1	16,6	19,4	24,9	27,7	30,5
AR-101608AL	EFXE-101608AL	5,7	11,5	17,3	20,2	26,0	28,9	31,8
AR-102008AL	EFXE-102008AL	6,7	13,4	20,1	23,5	30,2	33,5	36,9
AQ-121208AL	EFXE-121208AL	5,4	10,8	16,2	18,9	24,3	27,0	29,7
AR-122209AL	EFXE-122209AL	8,4	16,8	25,3	29,5	37,9	42,1	46,3
AQ-141409AL	EFXE-141409AL	6,8	13,7	20,6	24,1	31,0	34,4	37,9
AR-142009AL	EFXE-142009AL	8,5	17,1	25,7	30,0	38,5	42,8	47,1
AQ-161609AL	EFXE-161609AL	8,6	17,2	25,8	30,1	38,7	43,0	47,3
AR-162410AL	EFXE-162410AL	11,0	22,1	33,1	38,7	49,7	55,3	60,8
AR-162609AL	EFXE-162609AL	10,9	21,9	32,8	38,3	49,3	54,8	60,2
AQ-181810AL	EFXE-181810AL	9,8	19,7	29,6	34,5	44,4	49,3	54,3
AR-182810AL	EFXE-182810AL	13,0	26,1	39,1	45,7	58,7	65,2	71,8
AR-202311AL	EFXE-202311AL	12,9	25,8	38,7	45,1	58,0	64,5	71,0
AR-202318AL	EFXE-202318AL	17,7	35,5	53,3	62,2	80,0	88,9	97,8
AR-232811AL	EFXE-232811AL	15,8	31,6	47,5	55,4	71,3	79,2	87,1
AR-233312AL	EFXE-233312AL	18,5	37,0	55,6	64,8	83,4	92,7	101,9
AR-233318AL	EFXE-233318AL	23,7	47,5	71,3	83,2	107,0	118,9	130,8

Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	3,9	6,5	7,8	10,4	11,7	13,0
AR-081306AL	EFXE-081306AL	3,5	5,3	8,8	10,6	14,1	15,9	17,7
AR-081806AL	EFXE-081806AL	4,4	6,6	11,1	13,3	17,8	20,0	22,2
AR-081808AL	EFXE-081808AL	5,5	8,2	13,8	16,5	22,1	24,8	27,6
AR-082505AL	EFXE-082505AL	5,3	8,0	13,4	16,1	21,4	24,1	26,8
AR-082508AL	EFXE-082508AL	7,1	10,7	17,8	21,4	28,5	32,1	35,7
AQ-101008AL	EFXE-101008AL	4,3	6,5	10,8	13,0	17,4	19,6	21,7
AR-101508AL	EFXE-101508AL	5,5	8,3	13,8	16,6	22,2	24,9	27,7
AR-101608AL	EFXE-101608AL	5,7	8,6	14,4	17,3	23,1	26,0	28,9
AR-102008AL	EFXE-102008AL	6,7	10,0	16,7	20,1	26,8	30,2	33,5
AQ-121208AL	EFXE-121208AL	5,4	8,1	13,5	16,2	21,6	24,3	27,0
AR-122209AL	EFXE-122209AL	8,4	12,6	21,0	25,3	33,7	37,9	42,1
AQ-141409AL	EFXE-141409AL	6,8	10,3	17,2	20,6	27,5	31,0	34,4
AR-142009AL	EFXE-142009AL	8,5	12,8	21,4	25,7	34,2	38,5	42,8
AQ-161609AL	EFXE-161609AL	8,6	12,9	21,5	25,8	34,4	38,7	43,0
AR-162410AL	EFXE-162410AL	11,0	16,5	27,6	33,1	44,2	49,7	55,3
AR-162609AL	EFXE-162609AL	10,9	16,4	27,4	32,8	43,8	49,3	54,8
AQ-181810AL	EFXE-181810AL	9,8	14,8	24,6	29,6	39,5	44,4	49,3
AR-182810AL	EFXE-182810AL	13,0	19,5	32,6	39,1	52,2	58,7	65,2
AR-202311AL	EFXE-202311AL	12,9	19,3	32,2	38,7	51,6	58,0	64,5
AR-202318AL	EFXE-202318AL	17,7	26,6	44,4	53,3	71,1	80,0	88,9
AR-232811AL	EFXE-232811AL	15,8	23,7	39,6	47,5	63,3	71,3	79,2
AR-233312AL	EFXE-233312AL	18,5	27,8	46,3	55,6	74,1	83,4	92,7
AR-233318AL	EFXE-233318AL	23,7	35,6	59,4	71,3	95,1	107,0	118,9

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	2,6	5,2	6,5	9,1	10,4	11,7
AR-081306AL	EFXE-081306AL	3,5	7,0	8,8	12,3	14,1	15,9
AR-081806AL	EFXE-081806AL	4,4	8,9	11,1	15,5	17,8	20,0
AR-081808AL	EFXE-081808AL	5,5	11,0	13,8	19,3	22,1	24,8
AR-082505AL	EFXE-082505AL	5,3	10,7	13,4	18,7	21,4	24,1
AR-082508AL	EFXE-082508AL	7,1	14,2	17,8	24,9	28,5	32,1
AQ-101008AL	EFXE-101008AL	4,3	8,7	10,8	15,2	17,4	19,6
AR-101508AL	EFXE-101508AL	5,5	11,1	13,8	19,4	22,2	24,9
AR-101608AL	EFXE-101608AL	5,7	11,5	14,4	20,2	23,1	26,0
AR-102008AL	EFXE-102008AL	6,7	13,4	16,7	23,5	26,8	30,2
AQ-121208AL	EFXE-121208AL	5,4	10,8	13,5	18,9	21,6	24,3
AR-122209AL	EFXE-122209AL	8,4	16,8	21,0	29,5	33,7	37,9
AQ-141409AL	EFXE-141409AL	6,8	13,7	17,2	24,1	27,5	31,0
AR-142009AL	EFXE-142009AL	8,5	17,1	21,4	30,0	34,2	38,5
AQ-161609AL	EFXE-161609AL	8,6	17,2	21,5	30,1	34,4	38,7
AR-162410AL	EFXE-162410AL	11,0	22,1	27,6	38,7	44,2	49,7
AR-162609AL	EFXE-162609AL	10,9	21,9	27,4	38,3	43,8	49,3
AQ-181810AL	EFXE-181810AL	9,8	19,7	24,6	34,5	39,5	44,4
AR-182810AL	EFXE-182810AL	13,0	26,1	32,6	45,7	52,2	58,7
AR-202311AL	EFXE-202311AL	12,9	25,8	32,2	45,1	51,6	58,0
AR-202318AL	EFXE-202318AL	17,7	35,5	44,4	62,2	71,1	80,0
AR-232811AL	EFXE-232811AL	15,8	31,6	39,6	55,4	63,3	71,3
AR-233312AL	EFXE-233312AL	18,5	37,0	46,3	64,8	74,1	83,4
AR-233318AL	EFXE-233318AL	23,7	47,5	59,4	83,2	95,1	107,0

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Enclosure types (aluminium)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
AQ-080806AL	EFXE-080806AL	1,3	2,6
AR-081306AL	EFXE-081306AL	1,7	3,5
AR-081806AL	EFXE-081806AL	2,2	4,4
AR-081808AL	EFXE-081808AL	2,7	5,5
AR-082505AL	EFXE-082505AL	2,6	5,3
AR-082508AL	EFXE-082508AL	3,5	7,1
AQ-101008AL	EFXE-101008AL	2,1	4,3
AR-101508AL	EFXE-101508AL	2,7	5,5
AR-101608AL	EFXE-101608AL	2,8	5,7
AR-102008AL	EFXE-102008AL	3,3	6,7
AQ-121208AL	EFXE-121208AL	2,7	5,4
AR-122209AL	EFXE-122209AL	4,2	8,4
AQ-141409AL	EFXE-141409AL	3,4	6,8
AR-142009AL	EFXE-142009AL	4,2	8,5
AQ-161609AL	EFXE-161609AL	4,3	8,6
AR-162410AL	EFXE-162410AL	5,5	11,0
AR-162609AL	EFXE-162609AL	5,4	10,9
AQ-181810AL	EFXE-181810AL	4,9	9,8
AR-182810AL	EFXE-182810AL	6,5	13,0
AR-202311AL	EFXE-202311AL	6,4	12,9
AR-202318AL	EFXE-202318AL	8,8	17,7
AR-232811AL	EFXE-232811AL	7,9	15,8
AR-233312AL	EFXE-233312AL	9,2	18,5
AR-233318AL	EFXE-233318AL	11,8	23,7

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Power dissipation – Stainless steel enclosures SB series

Enclosure types (stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	5,5	8,3	11,1	12,5	15,3	16,7	18,1
SB-151510	EFXE-151510SB	8,0	12,0	16,0	18,0	22,0	24,0	26,1
SB-142013	EFXE-142013SB	10,4	15,7	20,9	23,5	28,8	31,4	34,0
SB-202010	EFXE-202010SB	10,7	16,1	21,4	24,1	29,5	32,2	34,8
SB-202016	EFXE-202016SB	13,9	20,8	27,8	31,3	38,3	41,7	45,2
SB-202713	EFXE-202713SB	14,4	21,6	28,9	32,5	39,7	43,3	46,9
SB-272713	EFXE-272713SB	16,7	25,1	33,5	37,7	46,0	50,2	54,4
SB-203016	EFXE-203016SB	17,1	25,7	34,3	38,6	47,2	51,4	55,7
SB-273513	EFXE-273513SB	19,2	28,9	38,5	43,3	53,0	57,8	62,6
SB-282816	EFXE-282816SB	19,3	29,0	38,7	43,6	53,3	58,1	63,0
SB-204016	EFXE-204016SB	20,2	30,3	40,4	45,5	55,6	60,6	65,7
SB-353516	EFXE-353516SB	24,4	36,6	48,8	54,9	67,1	73,2	79,3
SB-282827	EFXE-282827SB	26,2	39,3	52,5	59,0	72,2	78,7	85,3
SB-355016	EFXE-355016SB	29,7	44,5	59,4	66,8	81,7	89,1	96,6
SB-383816	EFXE-383816SB	26,6	39,9	53,2	59,8	73,1	79,8	86,5
SB-384516	EFXE-384516SB	29,1	43,7	58,3	65,6	80,2	87,5	94,8
SB-385716	EFXE-385716SB	33,4	50,1	66,8	75,2	91,9	100,3	108,7
SB-505016	EFXE-505016SB	35,8	53,8	71,7	80,7	98,6	107,6	116,6
SB-383827	EFXE-383827SB	35,1	52,7	70,2	79,0	96,6	105,4	114,2
SB-575716	EFXE-575716SB	41,5	62,3	83,1	93,5	114,3	124,7	135,1
SB-577620	EFXE-577620SB	53,9	80,9	107,9	121,3	148,3	161,8	175,3
SB-575730	EFXE-575730SB	55,8	83,7	111,6	125,6	153,5	167,5	181,4
SB-769520	EFXE-769520SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6
SB-1258040	EFXE-1258040SB	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	8,3	9,7	12,5	13,9	15,3
SB-151510	EFXE-151510SB	4,0	8,0	12,0	14,0	18,0	20,0	22,0
SB-142013	EFXE-142013SB	5,2	10,4	15,7	18,3	23,5	26,2	28,8
SB-202010	EFXE-202010SB	5,3	10,7	16,1	18,7	24,1	26,8	29,5
SB-202016	EFXE-202016SB	6,9	13,9	20,8	24,3	31,3	34,8	38,3
SB-202713	EFXE-202713SB	7,2	14,4	21,6	25,2	32,5	36,1	39,7
SB-272713	EFXE-272713SB	8,3	16,7	25,1	29,3	37,7	41,8	46,0
SB-203016	EFXE-203016SB	8,5	17,1	25,7	30,0	38,6	42,9	47,2
SB-273513	EFXE-273513SB	9,6	19,2	28,9	33,7	43,3	48,2	53,0
SB-282816	EFXE-282816SB	9,6	19,3	29,0	33,9	43,6	48,4	53,3
SB-204016	EFXE-204016SB	10,1	20,2	30,3	35,4	45,5	50,5	55,6
SB-353516	EFXE-353516SB	12,2	24,4	36,6	42,7	54,9	61,0	67,1
SB-282827	EFXE-282827SB	13,1	26,2	39,3	45,9	59,0	65,6	72,2
SB-355016	EFXE-355016SB	14,8	29,7	44,5	52,0	66,8	74,3	81,7
SB-383816	EFXE-383816SB	13,3	26,6	39,9	46,5	59,8	66,5	73,1
SB-384516	EFXE-384516SB	14,5	29,1	43,7	51,0	65,6	72,9	80,2
SB-385716	EFXE-385716SB	16,7	33,4	50,1	58,5	75,2	83,6	91,9
SB-505016	EFXE-505016SB	17,9	35,8	53,8	62,7	80,7	89,7	98,6
SB-383827	EFXE-383827SB	17,5	35,1	52,7	61,4	79,0	87,8	96,6
SB-575716	EFXE-575716SB	20,7	41,5	62,3	72,7	93,5	103,9	114,3
SB-577620	EFXE-577620SB	26,9	53,9	80,9	94,4	121,3	134,8	148,3
SB-575730	EFXE-575730SB	27,9	55,8	83,7	97,7	125,6	139,5	153,5
SB-769520	EFXE-769520SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5
SB-1258040	EFXE-1258040SB	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	4,1	6,9	8,3	11,1	12,5	13,9
SB-151510	EFXE-151510SB	4,0	6,0	10,0	12,0	16,0	18,0	20,0
SB-142013	EFXE-142013SB	5,2	7,8	13,1	15,7	20,9	23,5	26,2
SB-202010	EFXE-202010SB	5,3	8,0	13,4	16,1	21,4	24,1	26,8
SB-202016	EFXE-202016SB	6,9	10,4	17,4	20,8	27,8	31,3	34,8
SB-202713	EFXE-202713SB	7,2	10,8	18,0	21,6	28,9	32,5	36,1
SB-272713	EFXE-272713SB	8,3	12,5	20,9	25,1	33,5	37,7	41,8
SB-203016	EFXE-203016SB	8,5	12,8	21,4	25,7	34,3	38,6	42,9
SB-273513	EFXE-273513SB	9,6	14,4	24,1	28,9	38,5	43,3	48,2
SB-282816	EFXE-282816SB	9,6	14,5	24,2	29,0	38,7	43,6	48,4
SB-204016	EFXE-204016SB	10,1	15,1	25,2	30,3	40,4	45,5	50,5
SB-353516	EFXE-353516SB	12,2	18,3	30,5	36,6	48,8	54,9	61,0
SB-282827	EFXE-282827SB	13,1	19,6	32,8	39,3	52,5	59,0	65,6
SB-355016	EFXE-355016SB	14,8	22,2	37,1	44,5	59,4	66,8	74,3
SB-383816	EFXE-383816SB	13,3	19,9	33,2	39,9	53,2	59,8	66,5
SB-384516	EFXE-384516SB	14,5	21,8	36,4	43,7	58,3	65,6	72,9
SB-385716	EFXE-385716SB	16,7	25,0	41,8	50,1	66,8	75,2	83,6
SB-505016	EFXE-505016SB	17,9	26,9	44,8	53,8	71,7	80,7	89,7
SB-383827	EFXE-383827SB	17,5	26,3	43,9	52,7	70,2	79,0	87,8
SB-575716	EFXE-575716SB	20,7	31,1	51,9	62,3	83,1	93,5	103,9
SB-577620	EFXE-577620SB	26,9	40,4	67,4	80,9	107,9	121,3	134,8
SB-575730	EFXE-575730SB	27,9	41,8	69,7	83,7	111,6	125,6	139,5
SB-769520	EFXE-769520SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5
SB-1258040	EFXE-1258040SB	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	2,7	5,5	6,9	9,7	11,1	12,5
SB-151510	EFXE-151510SB	4,0	8,0	10,0	14,0	16,0	18,0
SB-142013	EFXE-142013SB	5,2	10,4	13,1	18,3	20,9	23,5
SB-202010	EFXE-202010SB	5,3	10,7	13,4	18,7	21,4	24,1
SB-202016	EFXE-202016SB	6,9	13,9	17,4	24,3	27,8	31,3
SB-202713	EFXE-202713SB	7,2	14,4	18,0	25,2	28,9	32,5
SB-272713	EFXE-272713SB	8,3	16,7	20,9	29,3	33,5	37,7
SB-203016	EFXE-203016SB	8,5	17,1	21,4	30,0	34,3	38,6
SB-273513	EFXE-273513SB	9,6	19,2	24,1	33,7	38,5	43,3
SB-282816	EFXE-282816SB	9,6	19,3	24,2	33,9	38,7	43,6
SB-204016	EFXE-204016SB	10,1	20,2	25,2	35,4	40,4	45,5
SB-353516	EFXE-353516SB	12,2	24,4	30,5	42,7	48,8	54,9
SB-282827	EFXE-282827SB	13,1	26,2	32,8	45,9	52,5	59,0
SB-355016	EFXE-355016SB	14,8	29,7	37,1	52,0	59,4	66,8
SB-383816	EFXE-383816SB	13,3	26,6	33,2	46,5	53,2	59,8
SB-384516	EFXE-384516SB	14,5	29,1	36,4	51,0	58,3	65,6
SB-385716	EFXE-385716SB	16,7	33,4	41,8	58,5	66,8	75,2
SB-505016	EFXE-505016SB	17,9	35,8	44,8	62,7	71,7	80,7
SB-383827	EFXE-383827SB	17,5	35,1	43,9	61,4	70,2	79,0
SB-575716	EFXE-575716SB	20,7	41,5	51,9	72,7	83,1	93,5
SB-577620	EFXE-577620SB	26,9	53,9	67,4	94,4	107,9	121,3
SB-575730	EFXE-575730SB	27,9	55,8	69,7	97,7	111,6	125,6
SB-769520	EFXE-769520SB	36,1	72,2	90,2	126,3	144,4	162,4
SB-1258040	EFXE-1258040SB	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
SB-101210	EFXE-101210SB	1,3	2,7
SB-151510	EFXE-151510SB	2,0	4,0
SB-142013	EFXE-142013SB	2,6	5,2
SB-202010	EFXE-202010SB	2,6	5,3
SB-202016	EFXE-202016SB	3,4	6,9
SB-202713	EFXE-202713SB	3,6	7,2
SB-272713	EFXE-272713SB	4,1	8,3
SB-203016	EFXE-203016SB	4,2	8,5
SB-273513	EFXE-273513SB	4,8	9,6
SB-282816	EFXE-282816SB	4,8	9,6
SB-204016	EFXE-204016SB	5,0	10,1
SB-353516	EFXE-353516SB	6,1	12,2
SB-282827	EFXE-282827SB	6,5	13,1
SB-355016	EFXE-355016SB	7,4	14,8
SB-383816	EFXE-383816SB	6,6	13,3
SB-384516	EFXE-384516SB	7,2	14,5
SB-385716	EFXE-385716SB	8,3	16,7
SB-505016	EFXE-505016SB	8,9	17,9
SB-383827	EFXE-383827SB	8,7	17,5
SB-575716	EFXE-575716SB	10,3	20,7
SB-577620	EFXE-577620SB	13,4	26,9
SB-575730	EFXE-575730SB	13,9	27,9
SB-769520	EFXE-769520SB	18,0	36,1
SB-1258040	EFXE-1258040SB	18,0	36,1

Power dissipation – Stainless steel enclosures ST series

Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **40**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	5,5	8,3	11,1	12,5	15,3	16,7	18,1
ST-151510	EFXE-151510ST	8,0	12,0	16,0	18,0	22,0	24,0	26,1
ST-142013	EFXE-142013ST	10,4	15,7	20,9	23,5	28,8	31,4	34,0
ST-202010	EFXE-202010ST	10,7	16,1	21,4	24,1	29,5	32,2	34,8
ST-202016	EFXE-202016ST	13,9	20,8	27,8	31,3	38,3	41,7	45,2
ST-202713	EFXE-202713ST	14,4	21,6	28,9	32,5	39,7	43,3	46,9
ST-272713	EFXE-272713ST	16,7	25,1	33,5	37,7	46,0	50,2	54,4
ST-203016	EFXE-203016ST	17,1	25,7	34,3	38,6	47,2	51,4	55,7
ST-273513	EFXE-273513ST	19,2	28,9	38,5	43,3	53,0	57,8	62,6
ST-282816	EFXE-282816ST	19,3	29,0	38,7	43,6	53,3	58,1	63,0
ST-204016	EFXE-204016ST	20,2	30,3	40,4	45,5	55,6	60,6	65,7
ST-353516	EFXE-353516ST	24,4	36,6	48,8	54,9	67,1	73,2	79,3
ST-282827	EFXE-282827ST	26,2	39,3	52,5	59,0	72,2	78,7	85,3
ST-355016	EFXE-355016ST	29,7	44,5	59,4	66,8	81,7	89,1	96,6
ST-383816	EFXE-383816ST	26,6	39,9	53,2	59,8	73,1	79,8	86,5
ST-384516	EFXE-384516ST	29,1	43,7	58,3	65,6	80,2	87,5	94,8
ST-385716	EFXE-385716ST	33,4	50,1	66,8	75,2	91,9	100,3	108,7
ST-505016	EFXE-505016ST	35,8	53,8	71,7	80,7	98,6	107,6	116,6
ST-383827	EFXE-383827ST	35,1	52,7	70,2	79,0	96,6	105,4	114,2
ST-575716	EFXE-575716ST	41,5	62,3	83,1	93,5	114,3	124,7	135,1
ST-577620	EFXE-577620ST	53,9	80,9	107,9	121,3	148,3	161,8	175,3
ST-575730	EFXE-575730ST	55,8	83,7	111,6	125,6	153,5	167,5	181,4
ST-769520	EFXE-769520ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6
ST-1258040	EFXE-1258040ST	72,2	108,3	144,4	162,4	198,5	216,6	234,6

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **50**°C						
		INTERNAL TEMP.60°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	8,3	9,7	12,5	13,9	15,3
ST-151510	EFXE-151510ST	4,0	8,0	12,0	14,0	18,0	20,0	22,0
ST-142013	EFXE-142013ST	5,2	10,4	15,7	18,3	23,5	26,2	28,8
ST-202010	EFXE-202010ST	5,3	10,7	16,1	18,7	24,1	26,8	29,5
ST-202016	EFXE-202016ST	6,9	13,9	20,8	24,3	31,3	34,8	38,3
ST-202713	EFXE-202713ST	7,2	14,4	21,6	25,2	32,5	36,1	39,7
ST-272713	EFXE-272713ST	8,3	16,7	25,1	29,3	37,7	41,8	46,0
ST-203016	EFXE-203016ST	8,5	17,1	25,7	30,0	38,6	42,9	47,2
ST-273513	EFXE-273513ST	9,6	19,2	28,9	33,7	43,3	48,2	53,0
ST-282816	EFXE-282816ST	9,6	19,3	29,0	33,9	43,6	48,4	53,3
ST-204016	EFXE-204016ST	10,1	20,2	30,3	35,4	45,5	50,5	55,6
ST-353516	EFXE-353516ST	12,2	24,4	36,6	42,7	54,9	61,0	67,1
ST-282827	EFXE-282827ST	13,1	26,2	39,3	45,9	59,0	65,6	72,2
ST-355016	EFXE-355016ST	14,8	29,7	44,5	52,0	66,8	74,3	81,7
ST-383816	EFXE-383816ST	13,3	26,6	39,9	46,5	59,8	66,5	73,1
ST-384516	EFXE-384516ST	14,5	29,1	43,7	51,0	65,6	72,9	80,2
ST-385716	EFXE-385716ST	16,7	33,4	50,1	58,5	75,2	83,6	91,9
ST-505016	EFXE-505016ST	17,9	35,8	53,8	62,7	80,7	89,7	98,6
ST-383827	EFXE-383827ST	17,5	35,1	52,7	61,4	79,0	87,8	96,6
ST-575716	EFXE-575716ST	20,7	41,5	62,3	72,7	93,5	103,9	114,3
ST-577620	EFXE-577620ST	26,9	53,9	80,9	94,4	121,3	134,8	148,3
ST-575730	EFXE-575730ST	27,9	55,8	83,7	97,7	125,6	139,5	153,5
ST-769520	EFXE-769520ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5
ST-1258040	EFXE-1258040ST	36,1	72,2	108,3	126,3	162,4	180,5	198,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **55**°C						
		INTERNAL TEMP.65°C (T6/T85°C)	INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	4,1	6,9	8,3	11,1	12,5	13,9
ST-151510	EFXE-151510ST	4,0	6,0	10,0	12,0	16,0	18,0	20,0
ST-142013	EFXE-142013ST	5,2	7,8	13,1	15,7	20,9	23,5	26,2
ST-202010	EFXE-202010ST	5,3	8,0	13,4	16,1	21,4	24,1	26,8
ST-202016	EFXE-202016ST	6,9	10,4	17,4	20,8	27,8	31,3	34,8
ST-202713	EFXE-202713ST	7,2	10,8	18,0	21,6	28,9	32,5	36,1
ST-272713	EFXE-272713ST	8,3	12,5	20,9	25,1	33,5	37,7	41,8
ST-203016	EFXE-203016ST	8,5	12,8	21,4	25,7	34,3	38,6	42,9
ST-273513	EFXE-273513ST	9,6	14,4	24,1	28,9	38,5	43,3	48,2
ST-282816	EFXE-282816ST	9,6	14,5	24,2	29,0	38,7	43,6	48,4
ST-204016	EFXE-204016ST	10,1	15,1	25,2	30,3	40,4	45,5	50,5
ST-353516	EFXE-353516ST	12,2	18,3	30,5	36,6	48,8	54,9	61,0
ST-282827	EFXE-282827ST	13,1	19,6	32,8	39,3	52,5	59,0	65,6
ST-355016	EFXE-355016ST	14,8	22,2	37,1	44,5	59,4	66,8	74,3
ST-383816	EFXE-383816ST	13,3	19,9	33,2	39,9	53,2	59,8	66,5
ST-384516	EFXE-384516ST	14,5	21,8	36,4	43,7	58,3	65,6	72,9
ST-385716	EFXE-385716ST	16,7	25,0	41,8	50,1	66,8	75,2	83,6
ST-505016	EFXE-505016ST	17,9	26,9	44,8	53,8	71,7	80,7	89,7
ST-383827	EFXE-383827ST	17,5	26,3	43,9	52,7	70,2	79,0	87,8
ST-575716	EFXE-575716ST	20,7	31,1	51,9	62,3	83,1	93,5	103,9
ST-577620	EFXE-577620ST	26,9	40,4	67,4	80,9	107,9	121,3	134,8
ST-575730	EFXE-575730ST	27,9	41,8	69,7	83,7	111,6	125,6	139,5
ST-769520	EFXE-769520ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5
ST-1258040	EFXE-1258040ST	36,1	54,1	90,2	108,3	144,4	162,4	180,5

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **60**°C					
		INTERNAL TEMP.70°C (T6/T85°C)	INTERNAL TEMP.80°C (T6/T85°C)	INTERNAL TEMP.85°C (T5/T100°C)	INTERNAL TEMP.95°C (T5/T100°C)	INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	2,7	5,5	6,9	9,7	11,1	12,5
ST-151510	EFXE-151510ST	4,0	8,0	10,0	14,0	16,0	18,0
ST-142013	EFXE-142013ST	5,2	10,4	13,1	18,3	20,9	23,5
ST-202010	EFXE-202010ST	5,3	10,7	13,4	18,7	21,4	24,1
ST-202016	EFXE-202016ST	6,9	13,9	17,4	24,3	27,8	31,3
ST-202713	EFXE-202713ST	7,2	14,4	18,0	25,2	28,9	32,5
ST-272713	EFXE-272713ST	8,3	16,7	20,9	29,3	33,5	37,7
ST-203016	EFXE-203016ST	8,5	17,1	21,4	30,0	34,3	38,6
ST-273513	EFXE-273513ST	9,6	19,2	24,1	33,7	38,5	43,3
ST-282816	EFXE-282816ST	9,6	19,3	24,2	33,9	38,7	43,6
ST-204016	EFXE-204016ST	10,1	20,2	25,2	35,4	40,4	45,5
ST-353516	EFXE-353516ST	12,2	24,4	30,5	42,7	48,8	54,9
ST-282827	EFXE-282827ST	13,1	26,2	32,8	45,9	52,5	59,0
ST-355016	EFXE-355016ST	14,8	29,7	37,1	52,0	59,4	66,8
ST-383816	EFXE-383816ST	13,3	26,6	33,2	46,5	53,2	59,8
ST-384516	EFXE-384516ST	14,5	29,1	36,4	51,0	58,3	65,6
ST-385716	EFXE-385716ST	16,7	33,4	41,8	58,5	66,8	75,2
ST-505016	EFXE-505016ST	17,9	35,8	44,8	62,7	71,7	80,7
ST-383827	EFXE-383827ST	17,5	35,1	43,9	61,4	70,2	79,0
ST-575716	EFXE-575716ST	20,7	41,5	51,9	72,7	83,1	93,5
ST-577620	EFXE-577620ST	26,9	53,9	67,4	94,4	107,9	121,3
ST-575730	EFXE-575730ST	27,9	55,8	69,7	97,7	111,6	125,6
ST-769520	EFXE-769520ST	36,1	72,2	90,2	126,3	144,4	162,4
ST-1258040	EFXE-1258040ST	36,1	72,2	90,2	126,3	144,4	162,4

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Enclosure types (Stainless steel)		Maximum power dissipation (W) – Tamb. up to **95**°C	
		INTERNAL TEMP.100°C (T4/T135°C)	INTERNAL TEMP.105°C (T4/T135°C)
ST-101210	EFXE-101210ST	1,3	2,7
ST-151510	EFXE-151510ST	2,0	4,0
ST-142013	EFXE-142013ST	2,6	5,2
ST-202010	EFXE-202010ST	2,6	5,3
ST-202016	EFXE-202016ST	3,4	6,9
ST-202713	EFXE-202713ST	3,6	7,2
ST-272713	EFXE-272713ST	4,1	8,3
ST-203016	EFXE-203016ST	4,2	8,5
ST-273513	EFXE-273513ST	4,8	9,6
ST-282816	EFXE-282816ST	4,8	9,6
ST-204016	EFXE-204016ST	5,0	10,1
ST-353516	EFXE-353516ST	6,1	12,2
ST-282827	EFXE-282827ST	6,5	13,1
ST-355016	EFXE-355016ST	7,4	14,8
ST-383816	EFXE-383816ST	6,6	13,3
ST-384516	EFXE-384516ST	7,2	14,5
ST-385716	EFXE-385716ST	8,3	16,7
ST-505016	EFXE-505016ST	8,9	17,9
ST-383827	EFXE-383827ST	8,7	17,5
ST-575716	EFXE-575716ST	10,3	20,7
ST-577620	EFXE-577620ST	13,4	26,9
ST-575730	EFXE-575730ST	13,9	27,9
ST-769520	EFXE-769520ST	18,0	36,1
ST-1258040	EFXE-1258040ST	18,0	36,1

Maximum Power Dissipation calculation

The values specified in the tables as per clause 2.1.1 may be modified within the maximum admitted Tamb and maximum admitted internal temperature as follows.

$$Pdiss\ (W) = \frac{Tmax - Tamb}{Rth}$$

$Rth = A \times (\text{enclosure surface in } mm^2 \text{ except enclosure bottom})^B$

Legend:
Rth – Thermal resistance [K/W].
Tmax – Maximum allowed temperature inside enclosure.
Tamb – Ambient temperature of enclosure
A and B - coefficients determined for each series o enclosure. Exact values are given in manufacturer's documentation.

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[16.1] Routine testing

Junction boxes, local control stations and local control panels fitted with wiring, shall be subject to a routine dielectric strength test according to the clause 7.1 of IEC 60079-7.

[17] Specific Conditions of Use

- Enclosures marked with warning label: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" must be cleaned only by damp cloth or antistatic products.
- Apparatus equipped with drain / venting valve Technor Italsmea model ECR3:
  - the valve cannot be open when an explosive dust atmosphere is present.
  - The valve can be open when an explosive gas atmosphere is present: when open, the equipment reaches the protection degree IP44.
  - When the valve is left in open position, it should be protected from light exposure.
- On the intrinsic safety terminals, the user must only connect devices with compatible intrinsic safety parameters according to EN 60079-14.

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	0	17.11.2021
Instruction for use	TN2111 Annex A	0	08.11.2021
Apparatus list	TN2111 Annex B	0	17.11.2021
Drawings:			
Cable entries, plug, adaptors coupling systems	AC2111, sheet 1	0	10.11.2021
Example of operator arrangements for AQ-AR-EFE	AC2111, sheet 2	0	10.11.2021
Example of operator arrangements for SB-ST-EFEXE	AC2111, sheet 3	0	10.11.2021
Example terminals and earth bus bar	AC2111, sheet 4	0	10.11.2021
Drain / breath device type ECR3	AC2111, sheet 5	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 6	0	10.11.2021
Marking label SB..., ST..., AQ..., AR...	AC2111, sheet 7	0	10.11.2021

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Fiditas
explosion safety solutions

17065 · HAA
3635

[1] **SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 21 ATEX 0090X/1**

[4] Product: **Junction boxes, local control stations and local control panels**

Type: **AQ-***P / AQ-***AL / AR-***P / AR-***AL**
AQ-*P-HT / AQ-***AL-HT / AR-***P-HT / AR-***AL-HT**
SB-* / ST-***
EFE-* / EFXE-*** AL/ EFXE-***SB / EFXE-***ST**
EFE-*-HT / EFXE-***AL-HT**

[5] Manufacturer: **Technor Italsmea S.p.A.**

[6] Address: **Via Italia 33, 20060 Gessate (MI), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 23 CR 019**

[10] The marking of the product shall include the following:

II 1 G	**Ex ia IIC/IIB T6...T4 Ga**(2) or
II 2(1) G or **II 2(2) G**	**Ex db eb ia/ib mb [**(3)**] IIC/IIB T6...T4 Gb**(1) or
II 2 G	**Ex eb IIC/IIB T6...T4 Gb**(1) or
II 2 D	**Ex tb IIIC T85°C...T135°C Db**

(1) Others type of protection additional to 'eb' depending to the components actually mounted.

(2) In case of enclosures containing 'eb' terminals and/or 'ia Ga' already certified components (with compatible marking) only.

(3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib/ia Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

Our ref.: 23.CRT.071

Date: 19.04.2023

Fiditas d.o.o. ZAGREB

Fiditas Ltd. Slavka Tomerlina 44, 10361 Zagreb-Sesvete, Croatia
Phone: +385 1 5578565; info@fiditas.com ; www.fiditas.com

This certificate may only be reproduced in its entirety, without any change, schedule included

[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 21 ATEX 0090X /1**

[13] Description of the variation to the Product

New Ex products added:

- Surge voltage protection unit type: PLUGTRAB PT2 or PT4 – PHOENIX CONTACT; II 1G> Ex ia IIC T4...T6 Ga; KEMA 00 ATEX 1099X;
- SITRANS TH230/420, type: 7NG0317, 0310; 0410 TR320/TR420 7NG0327; 7NG0320; TYPE 7NG0420; Siemens AG; II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 17 ATEX 0116X
- Enhanced Model 644 Temperature Transmitter, ROSEMOUNT INCORPORATED, II 1G Ex ia IIC T6...T4 Ga; DEKRA 21ATEX0003X,
- Temperature Transmitter type: 5434D; 5431D; 6431D; 5435D; 5437D; 5437D; 5437B; 6437D, II 1G Ex ia IIC T6...T4 Ga; II 2(1)G Ex ib [ia Ga] IIC T6...T4 Gb; DEKRA 16 ATEX 0047X,
- Controls Units and / or Junction Boxes Type: GUB..., TECHNOR ITALSMEA; II 2G Ex db (*) IIC T(*) Gb; INERIS 22 ATEX 0008X
- Cable Transit Device type: CF 8 Ex, CF 32 Ex, CF 16 Ex, C RS T...Ex, RS..B Ex, SF...Ex, SFX...B Ex, B...B Ex, R...B Ex and RO...B; ROXTEC INTERNATIONAL AB, II 2G Ex e IIC Gb, II 2D Ex tb IIC Db; NEMKO 12 ATEX 1278X
- Cable Transit Device type: HD 16 Ex, HD 24 Ex, HD 32 Ex and HDLC Ex, ROXTEC INTERNATIONAL AB, II 2G Ex eb IIC Gb, II 2D Ex tb IIIC Db, PRESAFE 15 ATEX 6419X
- Control stations and junction boxes type: CP..., TECHNOR ITALSMEA, II 2G Ex db IIC T6 or T5 or T4 Gb or II 2(1)G Ex db [ia Ga] IIC T6 Gb(***) or II 2(2)G Ex db [ib] IIC T6 Gb (***); INERIS 03 ATEX 0009X
- Industrial plug and socket type: DXN1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 99 ATEX6027X
- Industrial plug and socket type: DXN3, MARECHAL ELECTRIC; II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6149X
- Industrial plug and socket type: DXN6, MARECHAL ELECTRIC, II 2G Ex db eb IIC T5 or T6; II 2D Ex tb IIIC T90°C/T70°C; LCIE 05 ATEX 6150X
- Industrial plug and socket type: PXN12C, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T*; II 2D Ex tb IIIC T* Db; LCIE 07 ATEX 6070X
- Industrial plug and socket type: DXN25C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 09ATEX3050X
- Industrial plug and socket type: DXN37C, MARECHAL ELECTRIC; II 2G Ex eb IIC T*; II 2G Ex ia or ib IIC T6; II2D Ex tb IIIC T*; LCIE 07ATEX6071X
- Industrial plug and socket type: SPeX, MARECHAL ELECTRIC, II 2G Ex eb IIC T*; II2D Ex tb IIIC T* Db; LCIE 07ATEX6073X
- Industrial plug and socket type: DXA1, MARECHAL ELECTRIC, II 2G Ex db eb IIC T* Gb; II 2D Ex tb IIC T*°C Db; LCIE 15ATEX 3033X
- Industrial plug and socket type: PNCX, MARECHAL ELECTRIC, II 2G Ex IIC T6 Gb; II 2D Ex tb IIIC T72°C Db; LCIE 16ATEX3001X
- Terminal type: WDU 240, WEIDMULLER, II 2G Ex eb IIC Gb; KEMA 01 ATEX 2186U.

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[14] Confidential Report No. FIDI 23 CR 019

[14.1] Routine testing

No change to specified in the initial certificate.

[15] Specific Conditions of Use

Addditional to those specified the initial certificate:

- Manufacturer must obey relevant specific condition of use of Ex equipment and/or schedule of limitation of Ex components installed in/on the product and forward to the end user if relevant for the installation and use.

[16] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

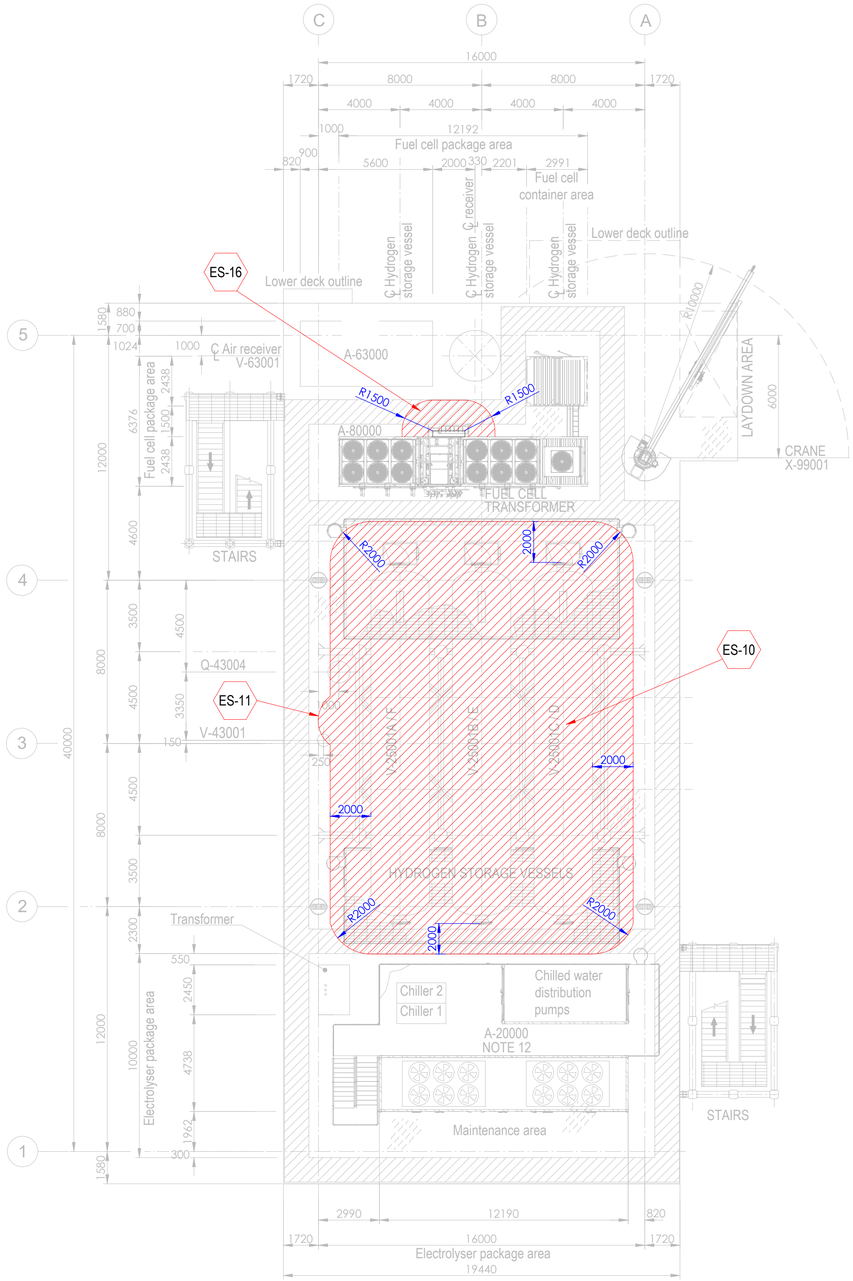
[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical note	TN2111	1	20.01.2023
Instruction for use	TN2111 Annex A	1	20.01.2023
Apparatus list	TN2111 Annex B	1	20.01.2023

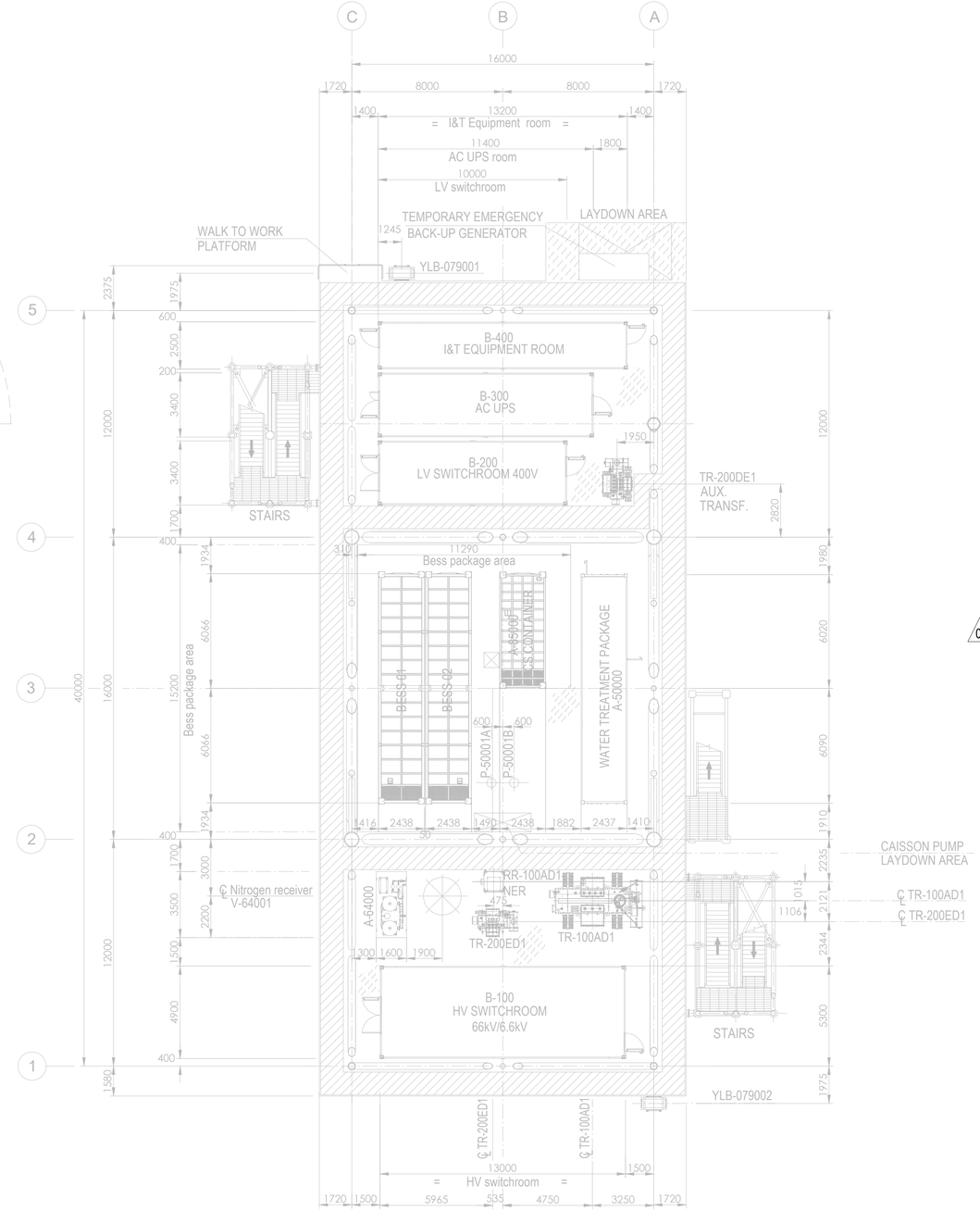
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



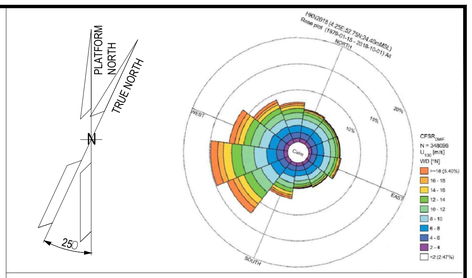
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

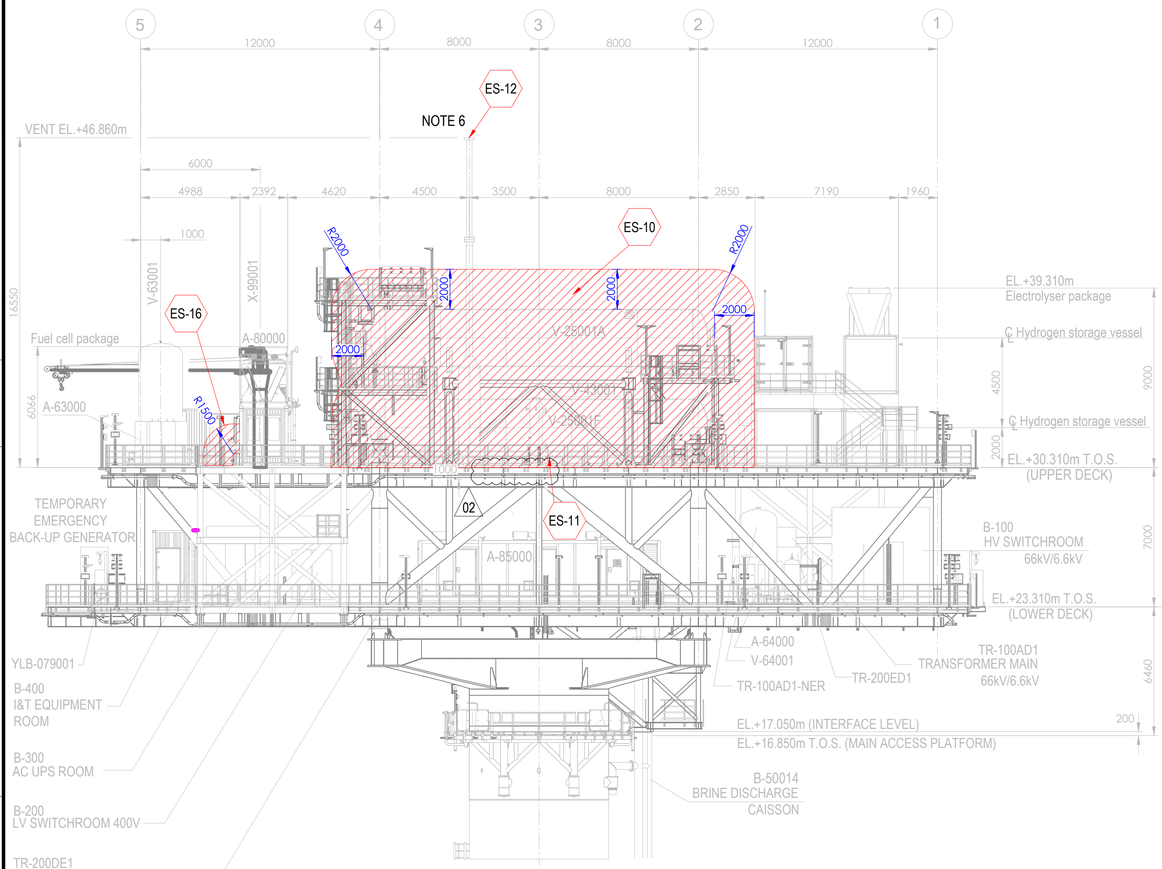
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

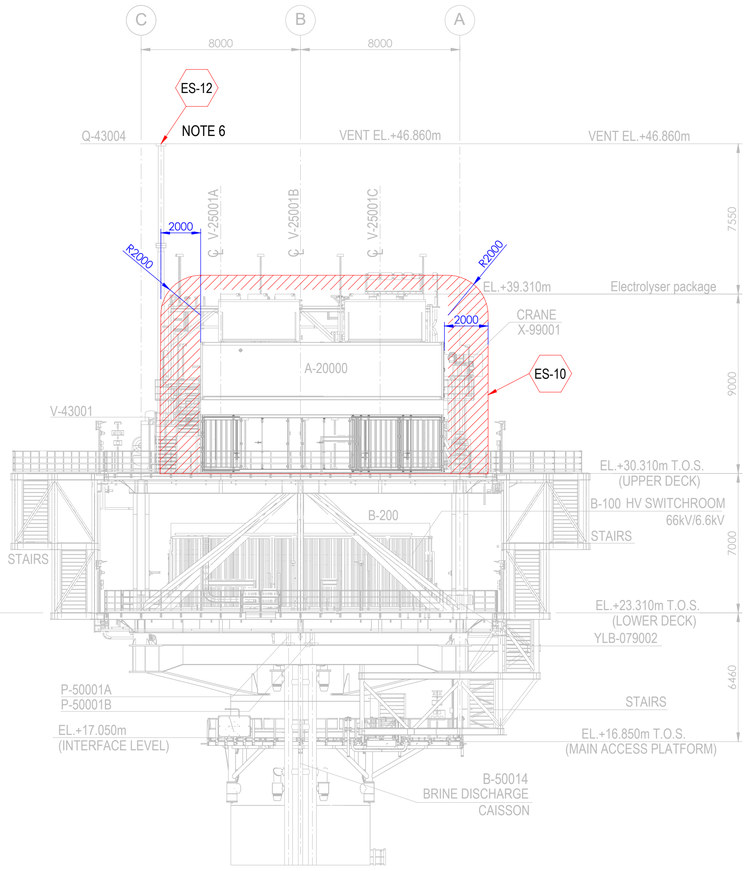
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

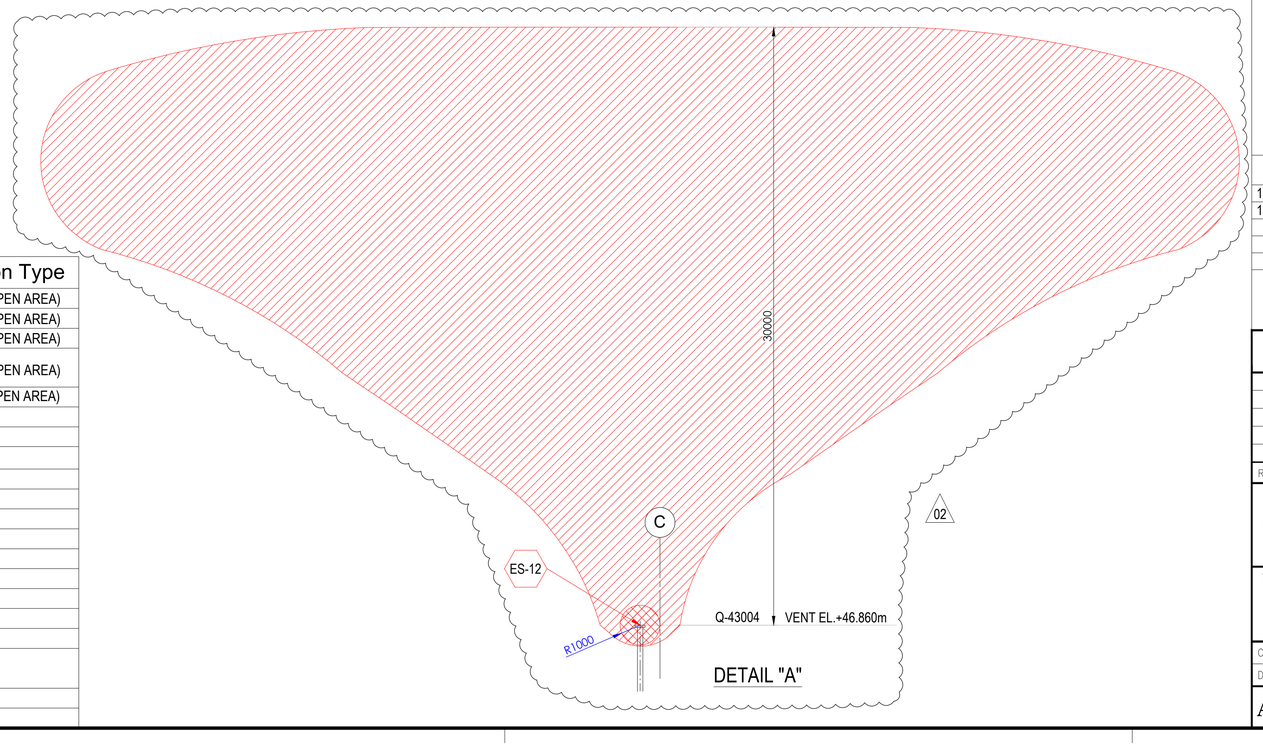


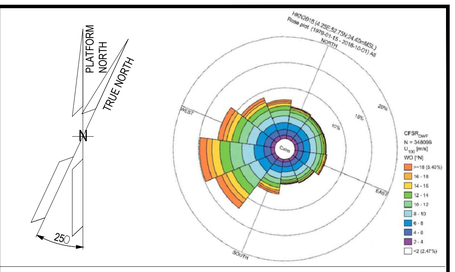
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-01 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001677	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-01	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001677		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	PL	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-01	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001677		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

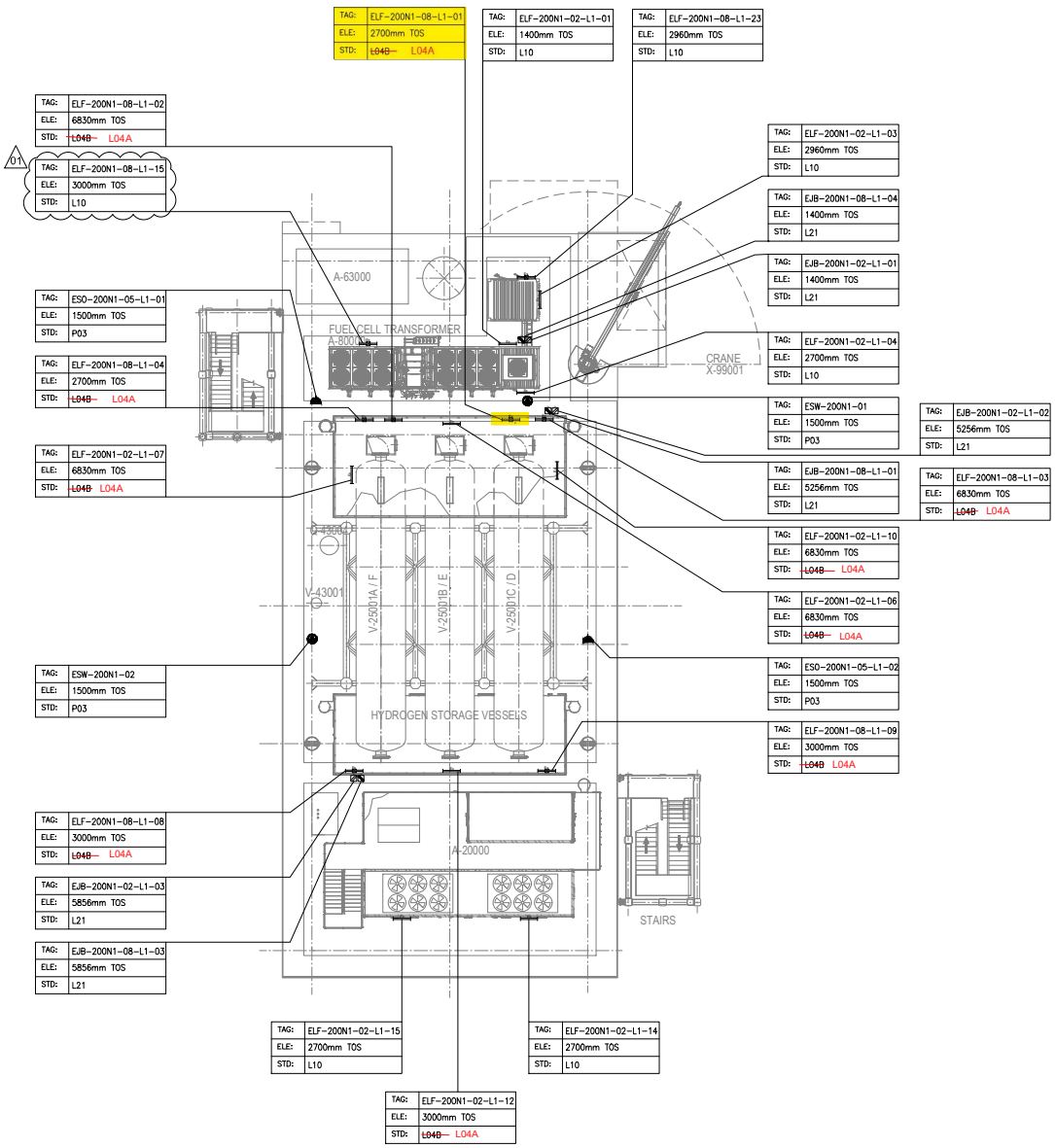
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

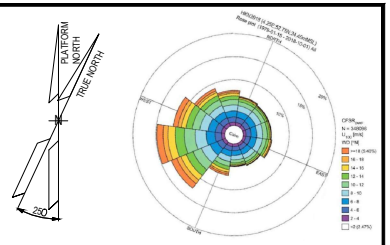
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-08	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:22:33.373Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-16T07:45:51.095Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. → EJB-200N1-08-L1-01

EJB-200N1-08-L1-01 — TYPE: L21E1
- P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
- P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm. → EJB-200N1-08-L1-07

EJB-200N1-08-L1-07 — TYPE: L21E1
- P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
- P-EJB-200N1-08-L1-06 — 4G4_E Arm. → EJB-200N1-08-L1-06
- P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
- P-EJB-200N1-08-L1-05 — 4G4_E Arm. → EJB-200N1-08-L1-05

EJB-200N1-08-L1-05 — TYPE: L21E1
- P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
- P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

EJB-200N1-08-L1-06 — TYPE: L21E1
- P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06

P-EJB-200N1-08-L1-03 — 4G4_E Arm.

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

EJB-200N1-08-L1-16 — TYPE: L21E1
- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm.

EJB-200N1-08-L1-17 — TYPE: L21E1
- P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
- P-EJB-200N1-08-L1-18 — 4G4_E Arm.

EJB-200N1-08-L1-18 — TYPE: L21E1
- P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
- P-EJB-200N1-08-L1-19 — 4G4_E Arm.

EJB-200N1-08-L1-19 — TYPE: L21E1
- P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
- P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25
- P-EJB-200N1-08-L1-15 — 4G4_E Arm.

EJB-200N1-08-L1-15 — TYPE: L21E1
- P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
- P-EJB-200N1-08-L1-14 — 4G4_E Arm.

EJB-200N1-08-L1-14 — TYPE: L21E1
- P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

P-EJB-200N1-08-L1-12 — 4G4_E Arm.

EJB-200N1-08-L1-12 — TYPE: L21E1
- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

EJB-200N1-08-L1-11 — TYPE: L21E1
- P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
- P-EJB-200N1-08-L1-10 — 4G4_E Arm.

EJB-200N1-08-L1-10 — TYPE: L21E1
- P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12
- P-EJB-200N1-08-L1-20 — 4G4_E Arm. → EJB-200N1-08-L1-20

EJB-200N1-08-L1-20 — TYPE: L21E1
- P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22

EJB-200N1-08-L1-03 — TYPE: L21E1
- P-EJB-200N1-08-L1-09 — 4G4_E Arm. → EJB-200N1-08-L1-09
- P-EJB-200N1-08-L1-08 — 4G4_E Arm. → EJB-200N1-08-L1-08

EJB-200N1-08-L1-09 — TYPE: L21E1
- P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
- P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11

EJB-200N1-08-L1-08 — TYPE: L21E1
- P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
- P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

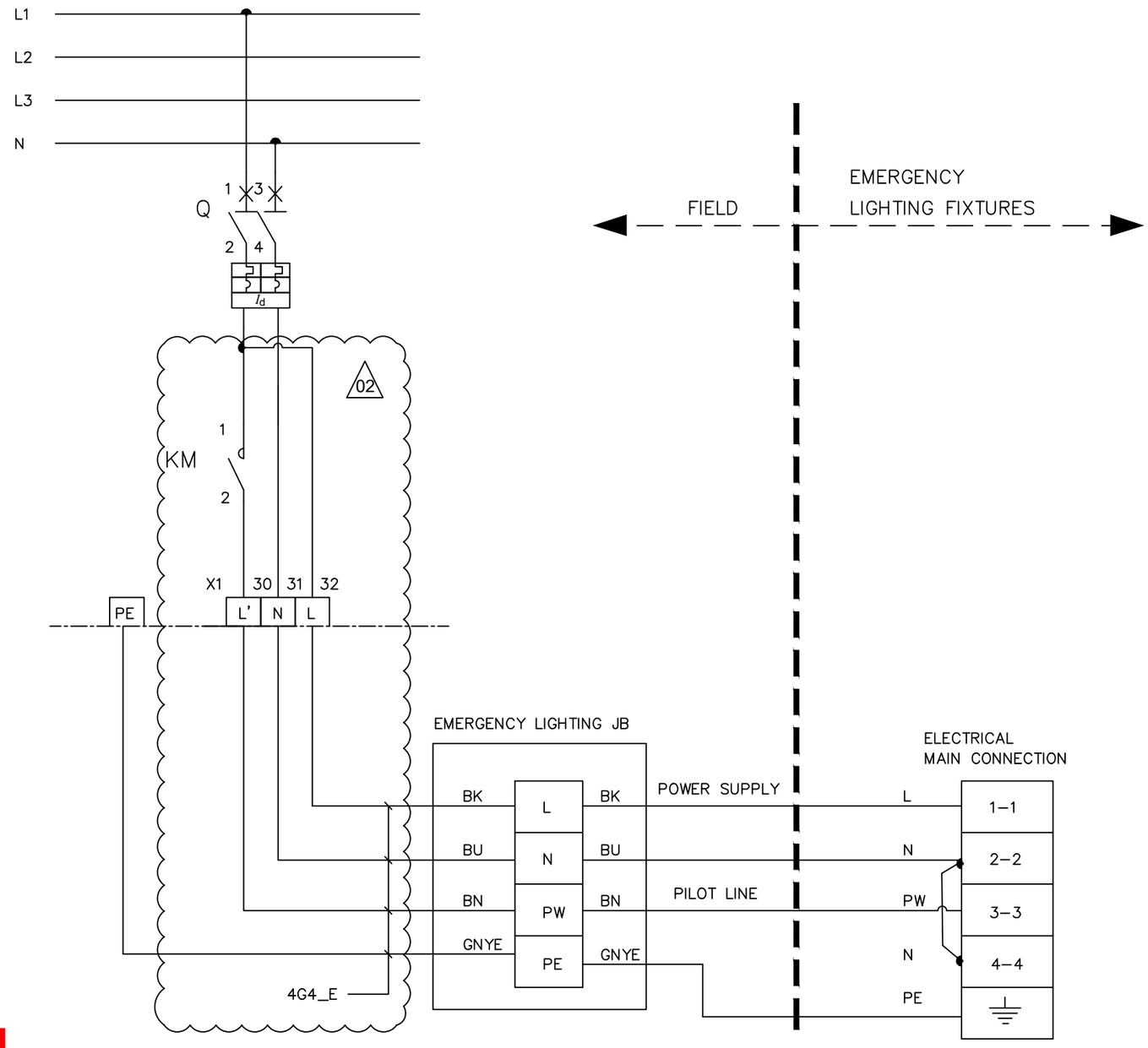
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

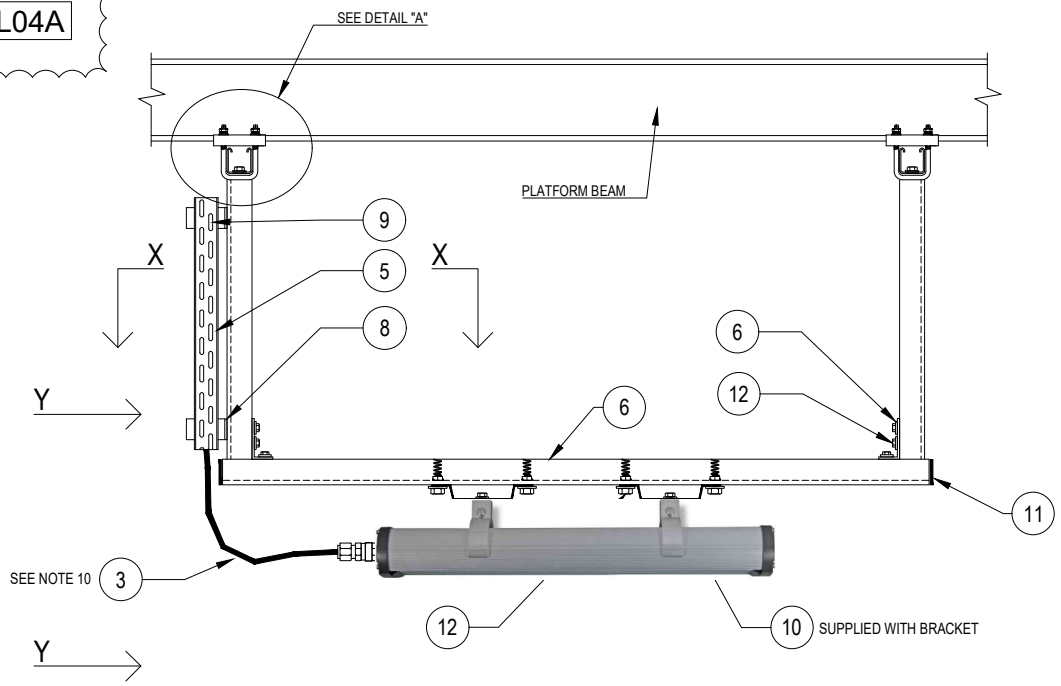
SHEET 014

REV. 02

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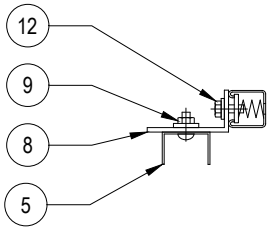
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L04A

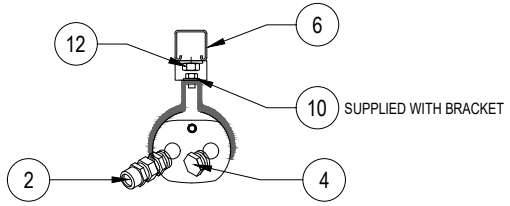


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex e) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		1	NOTE 2 NOTE 5
3	ARMOURED/UNARMOURED CABLE				NOTE 5
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE LADDER OR PERFORATED TRAY	AISI 316L		AS REQ.	
6	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2	AS REQ.	
7	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE	AISI 316L		2	NOTE 4
8	PLATE FOR ORTHOGONAL-TRASVERSAL CONNECTION (3 HOLES)	LPDE		4	
9	ROUND HEAD SCREW WITH SQUARE NECK COMPLETE WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L			
10	HEX. BOLT M8X16 WITH LARGE PLANE WASHER	AISI 316L		2	
11	PLUG FOR U-CHANNEL	LPDE		2	
12	HEX. BOLT M10X30 WITH PLANE WASHER, NUT FOR U-CHANNEL AND SPRING	AISI 316L		2	

SECTION "X-X"

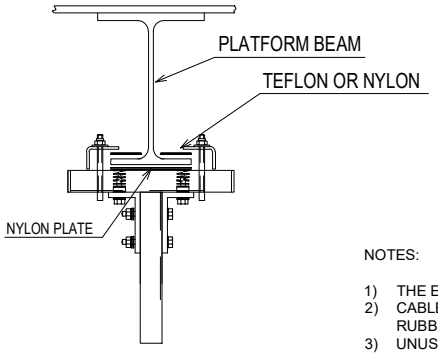


SECTION "Y-Y"

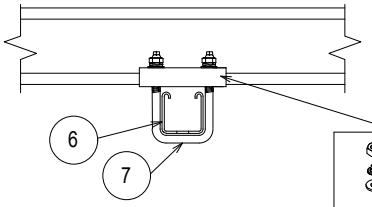


lighting fixture
Cortem LIFEX

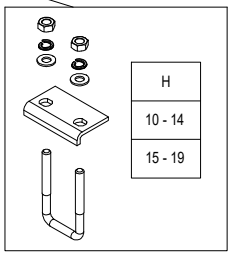
02



DETAIL "A"



VIEW "A"



NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.
5) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
FIXTURE SUSPENSION MOUNTED WITH U–CHANNEL SUPP.

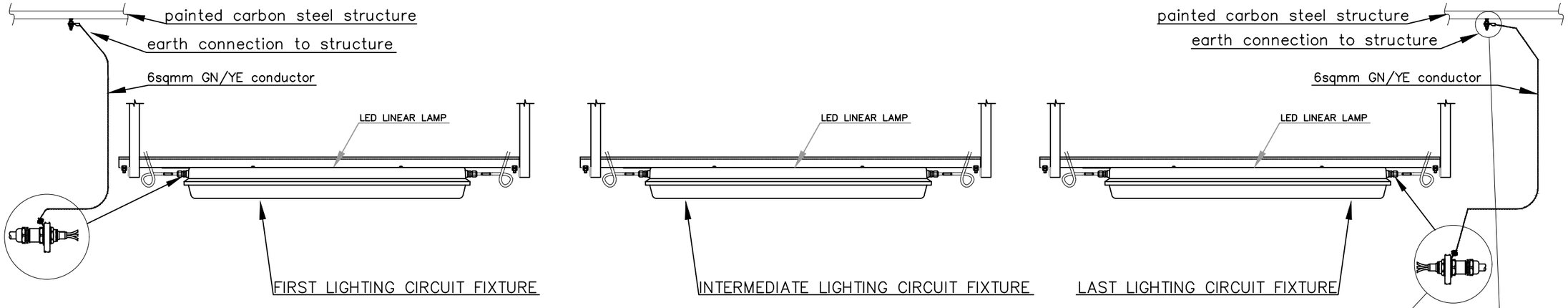
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 006 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

E32

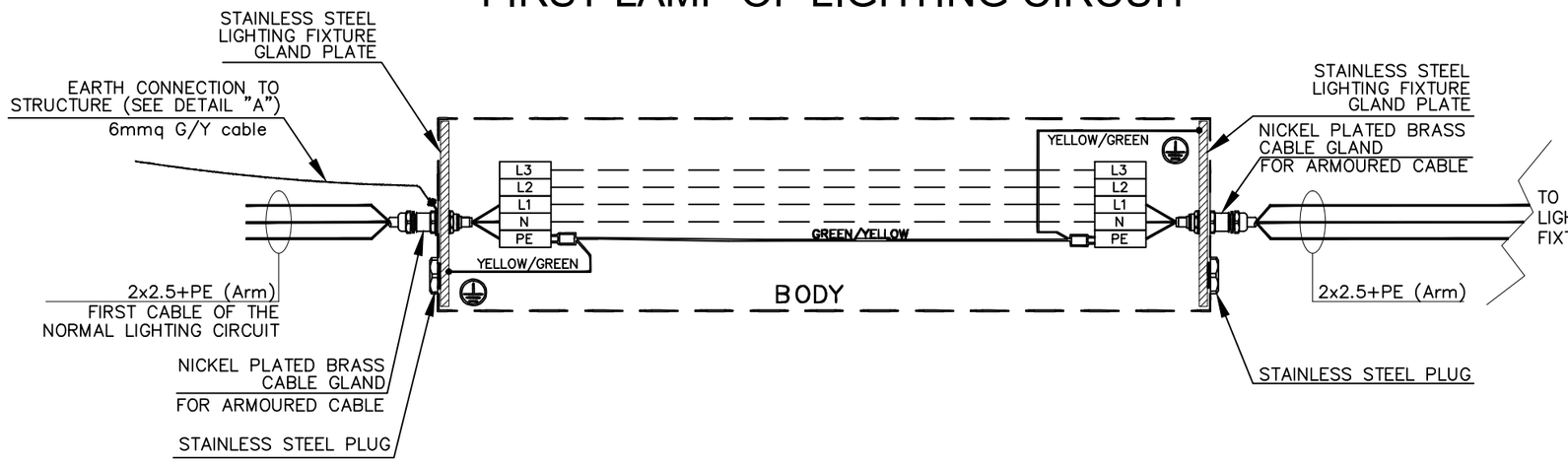


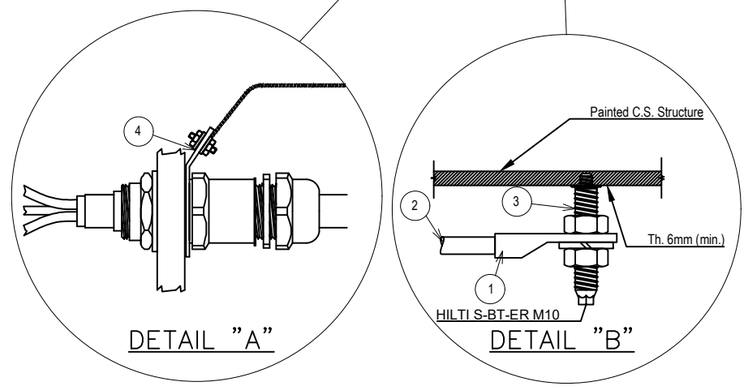
ONLY the first and the last lighting fixture of all circuits are connected to earthing system. The earthing continuity of the intermediate lighting fixtures of the circuits is guaranteed by the using of the first and the last lighting fixture earthing connection which is permanently connected to the earthing system as per the typical below.

Refer also to TYP. "E05" for Lighting Fixtures.

NORMAL LIGHTING CIRCUIT EARTHING CONTINUITY TYPICAL

FIRST LAMP OF LIGHTING CIRCUIT





POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			
2	Y/G INSULATING COPPER CONDUCTOR		6sqmm	ASR	
3	HILTI S-BT-ER M10/15 SN6 C/W NUTS AND GROWER	AISI 316L	M10X28		NOTE 1
4	CABLE GLAND EARTH TAG	NPB	M20		

The same logic is used for the earthing continuity of Emergency Lighting Circuits. The above typical has been done to represent the Earthing Continuity of G/Y conductors, the correct connections of all conductors in the respective Terminal Strips are shown in doc. AR-FEN-10-ROEC-600132 Lighting and Socket Circuit Diagrams.

NOTES:
1) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM FOR SINGLE EQUIPMENTS EARTHING CONNECTION.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING – OUTDOOR LINEAR LIGHTING FIXTURE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 023 | REV. 02

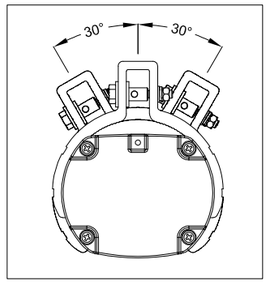
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

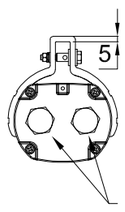
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

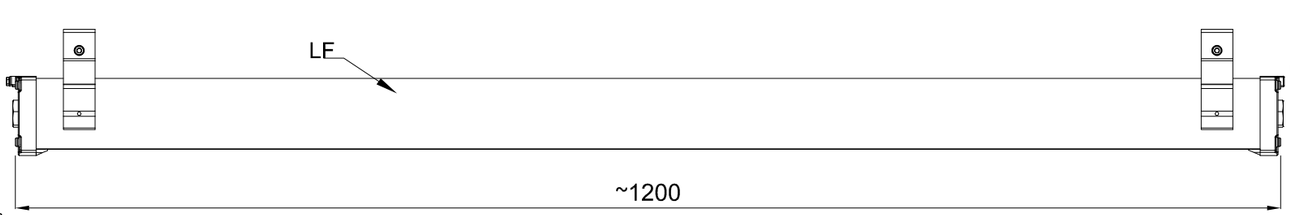
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

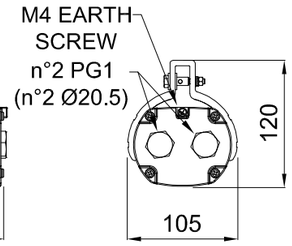


n°2 PG1
(n°2 Ø20.5)

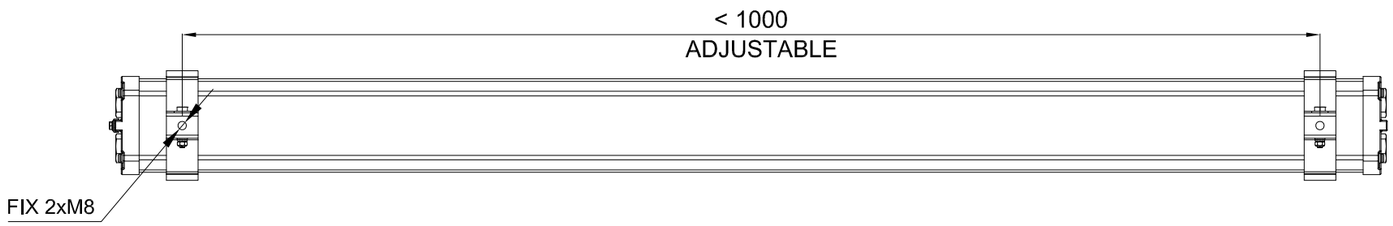
FRONT SIDE



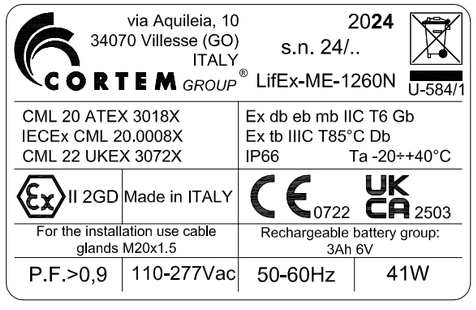
RIGHT SIDE (IN)



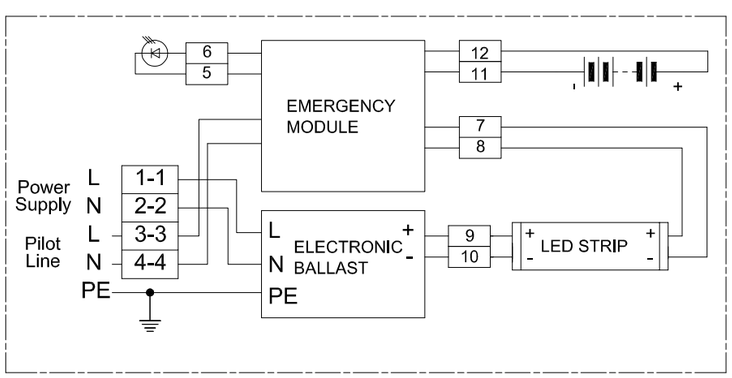
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

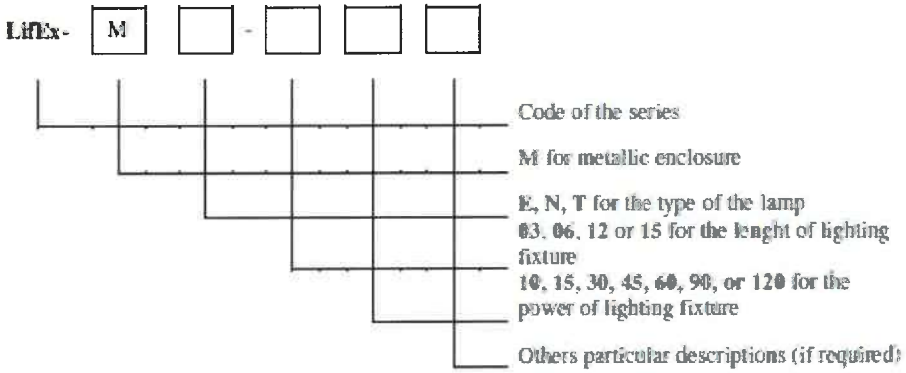
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

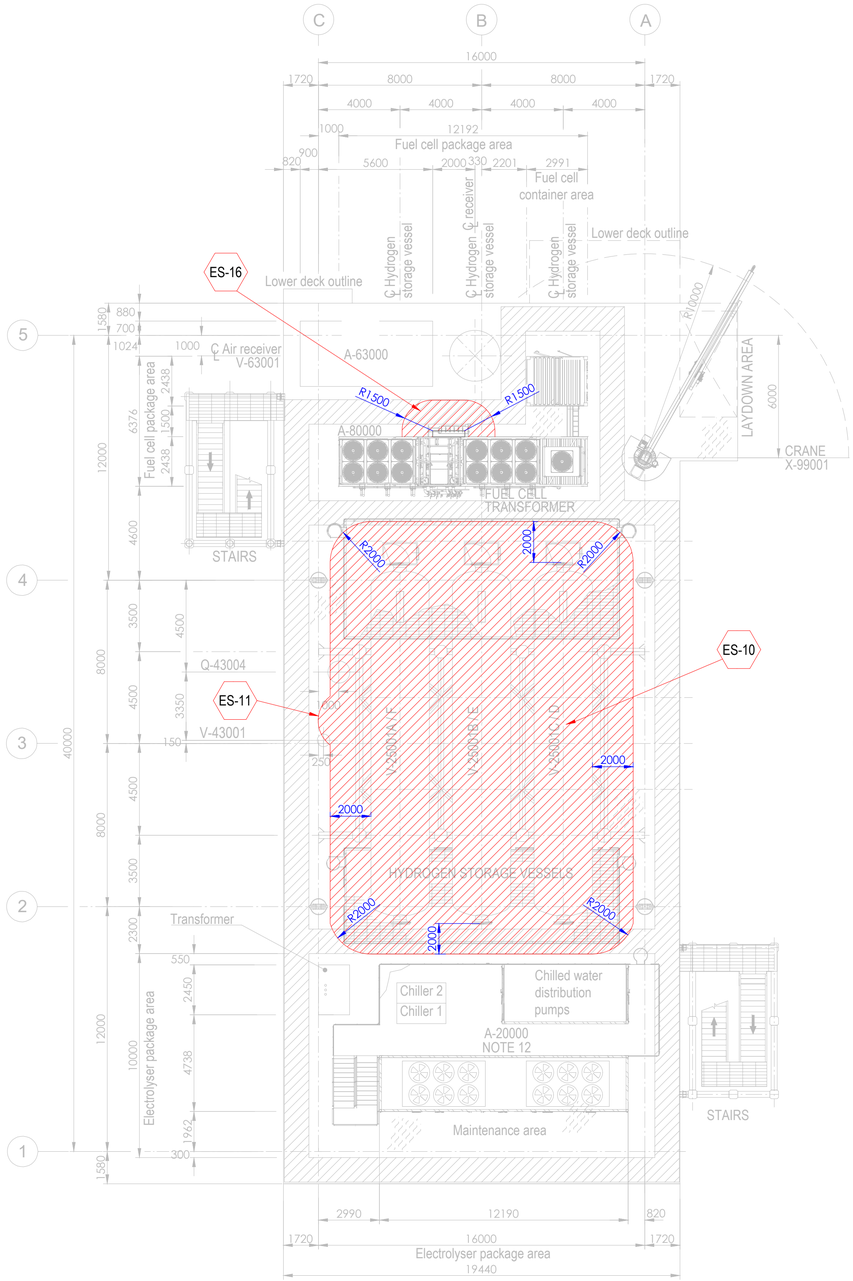
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

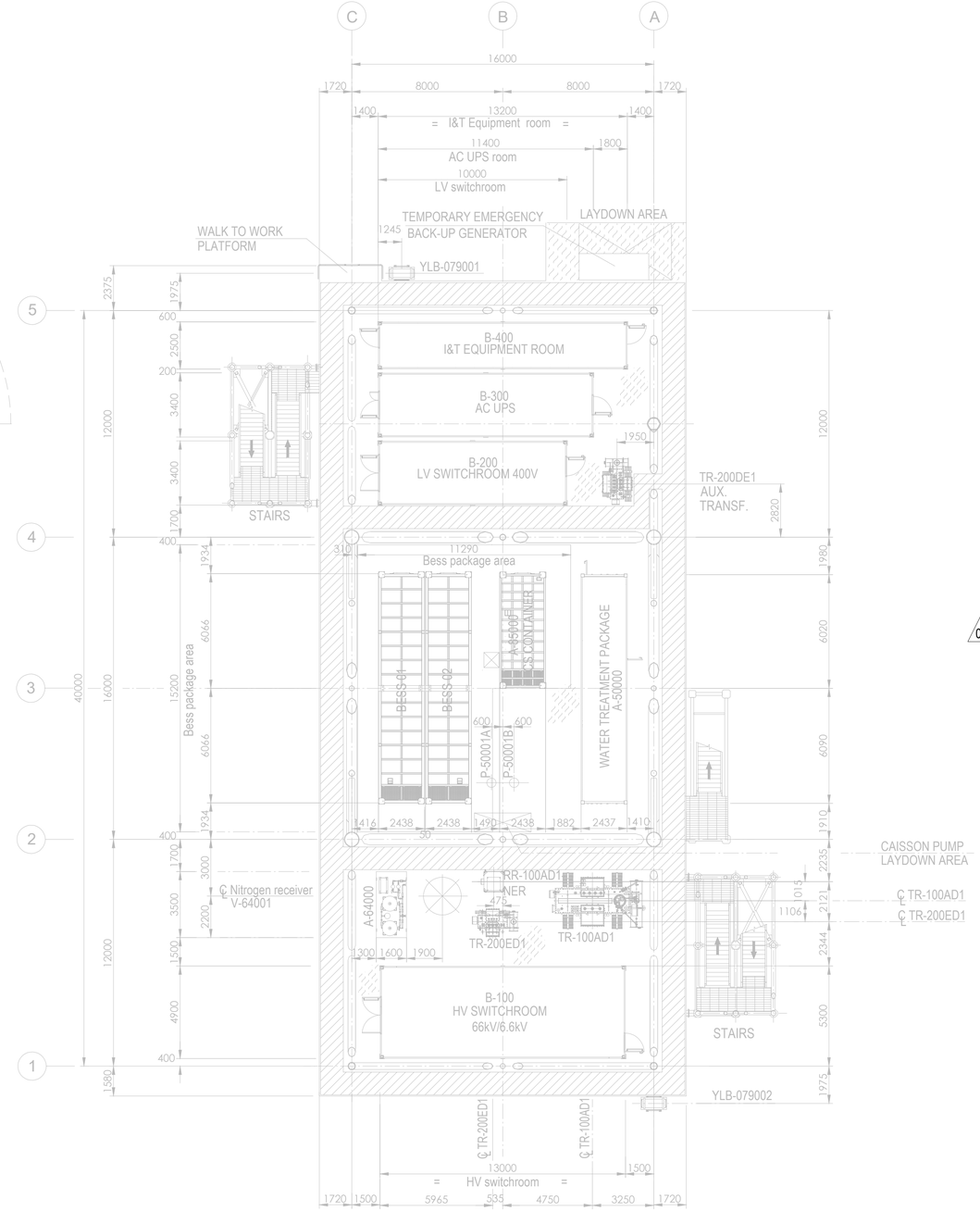
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



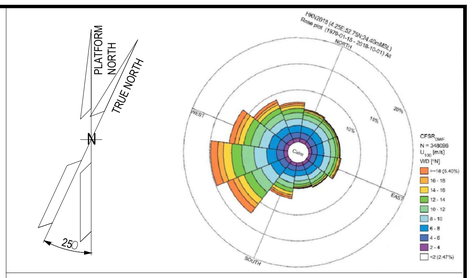
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

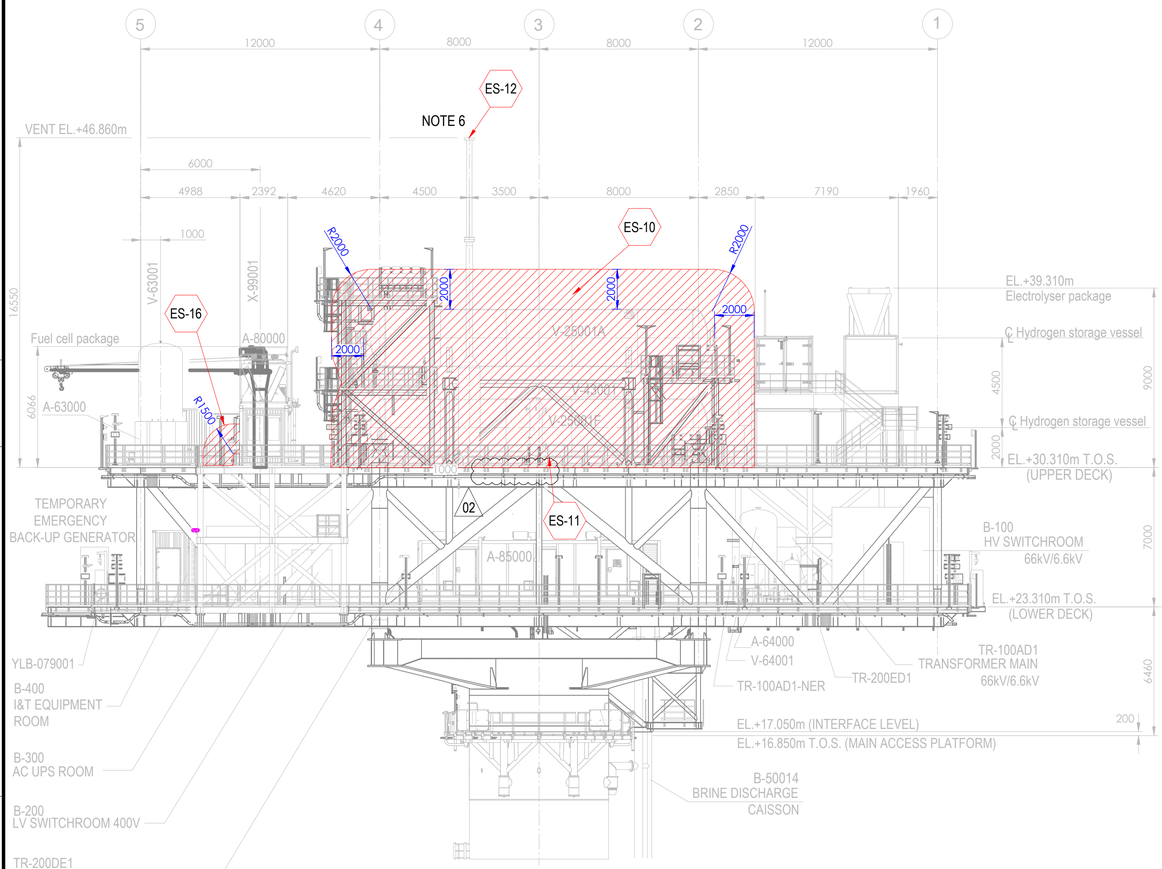
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

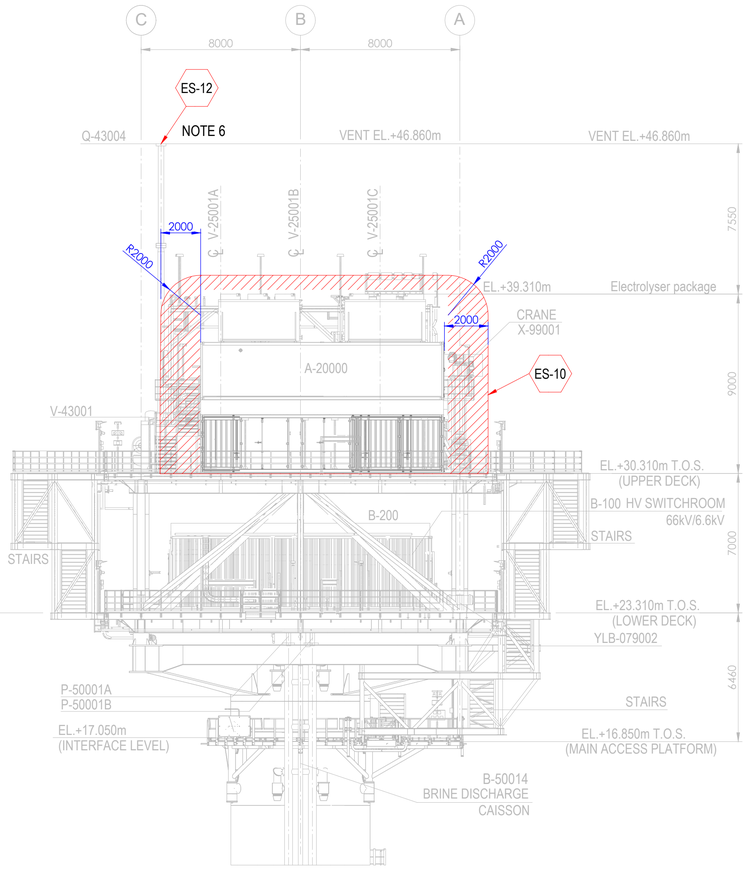
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

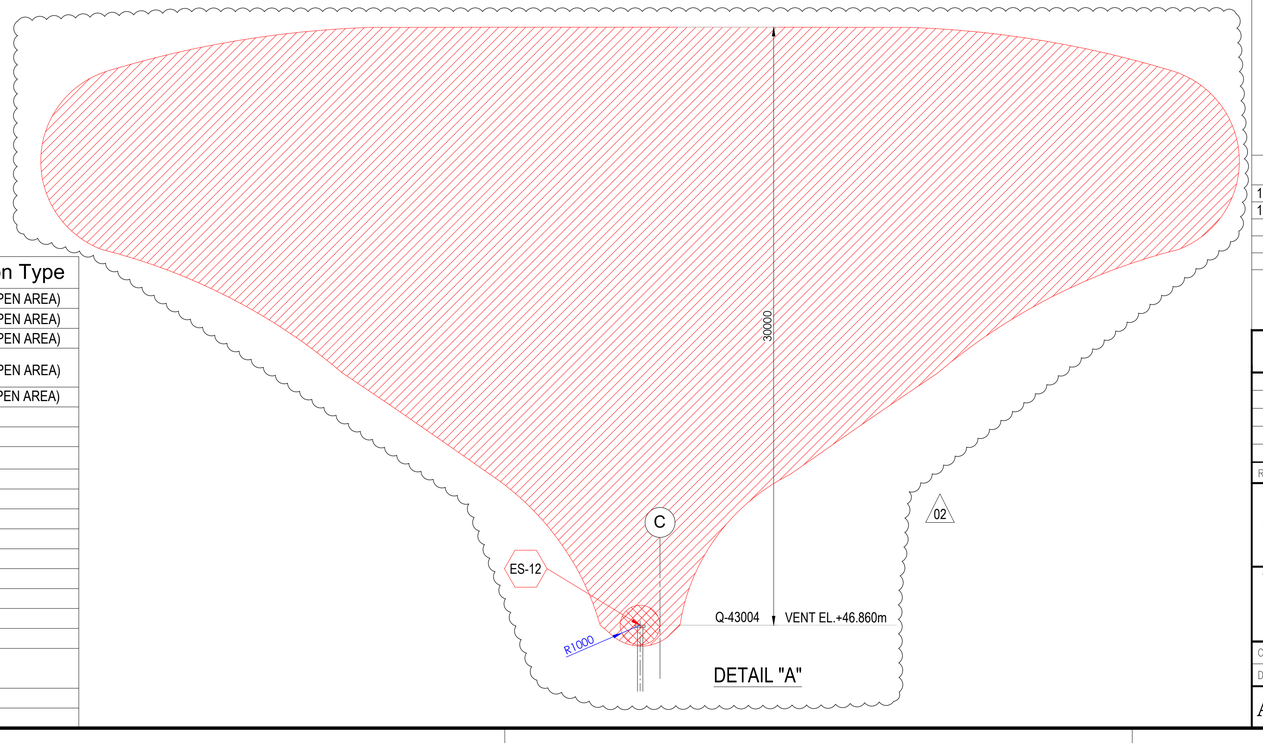


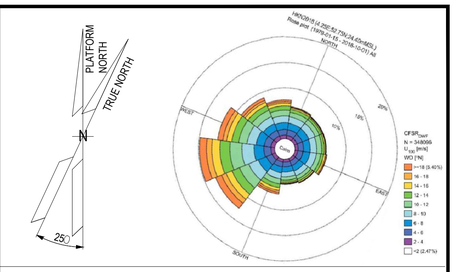
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-02 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001678	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-02	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001678		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	PL	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-02	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001678		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	

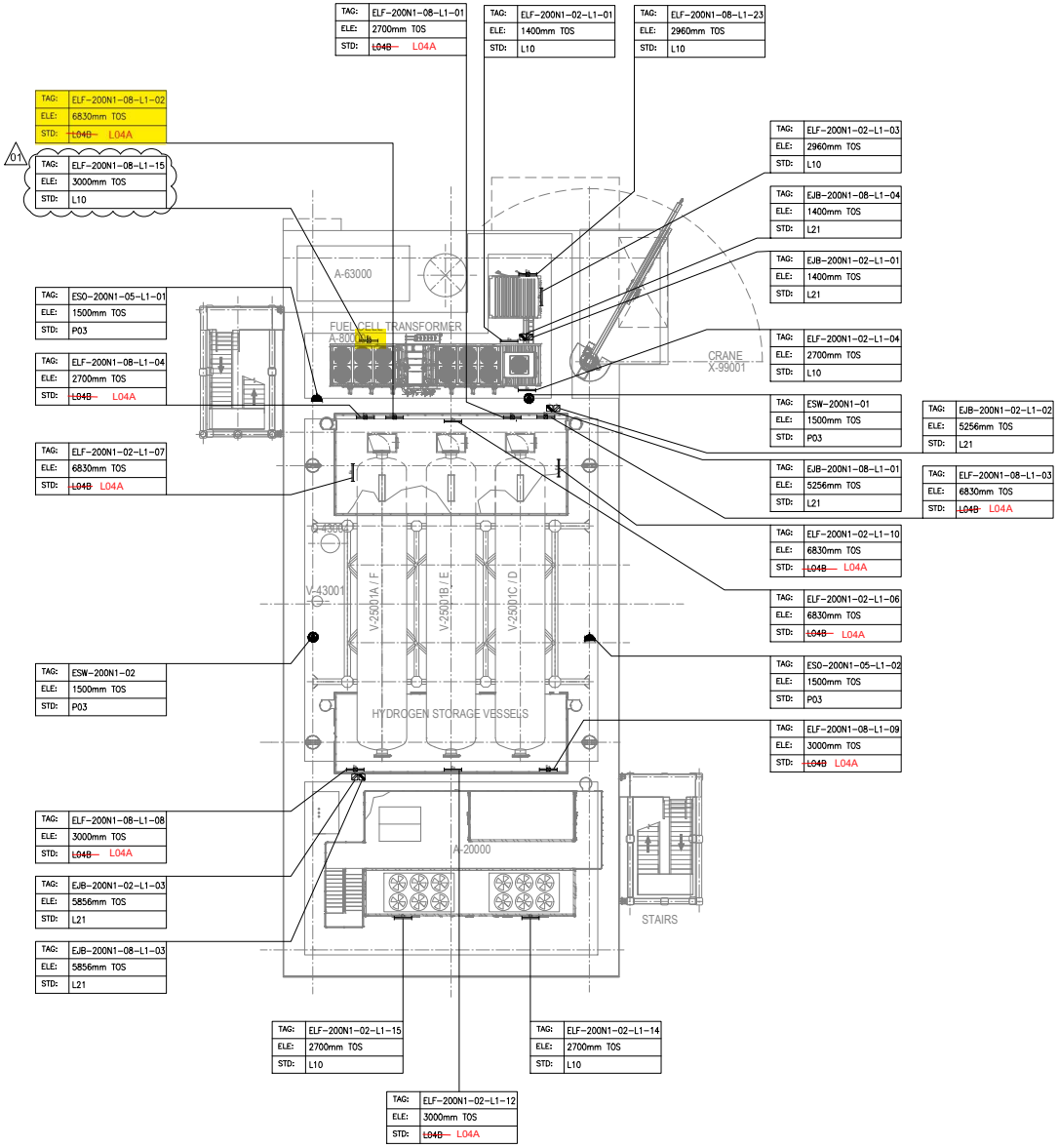
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

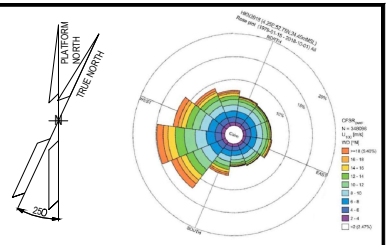
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-08	2025-01-14	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:03:53.995Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-14T17:49:04.502Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

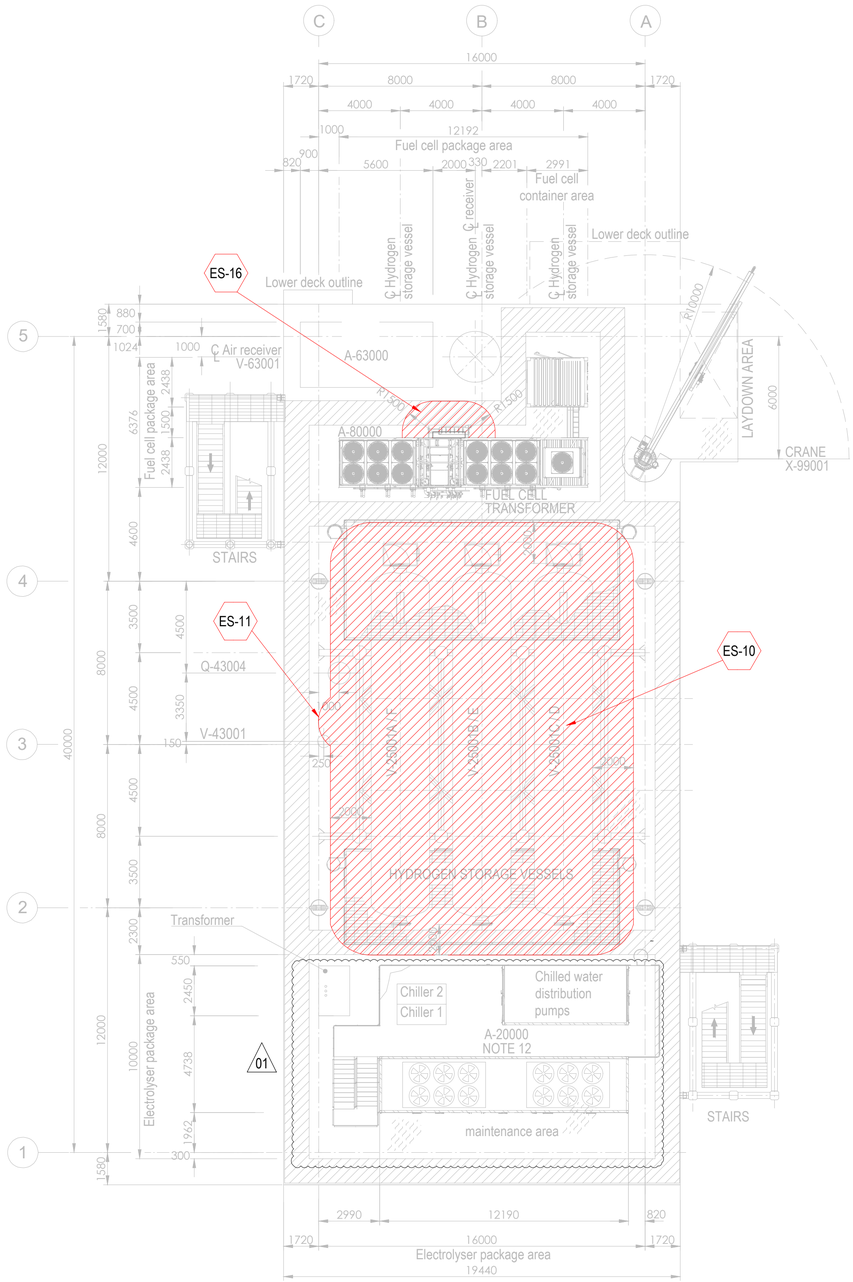
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

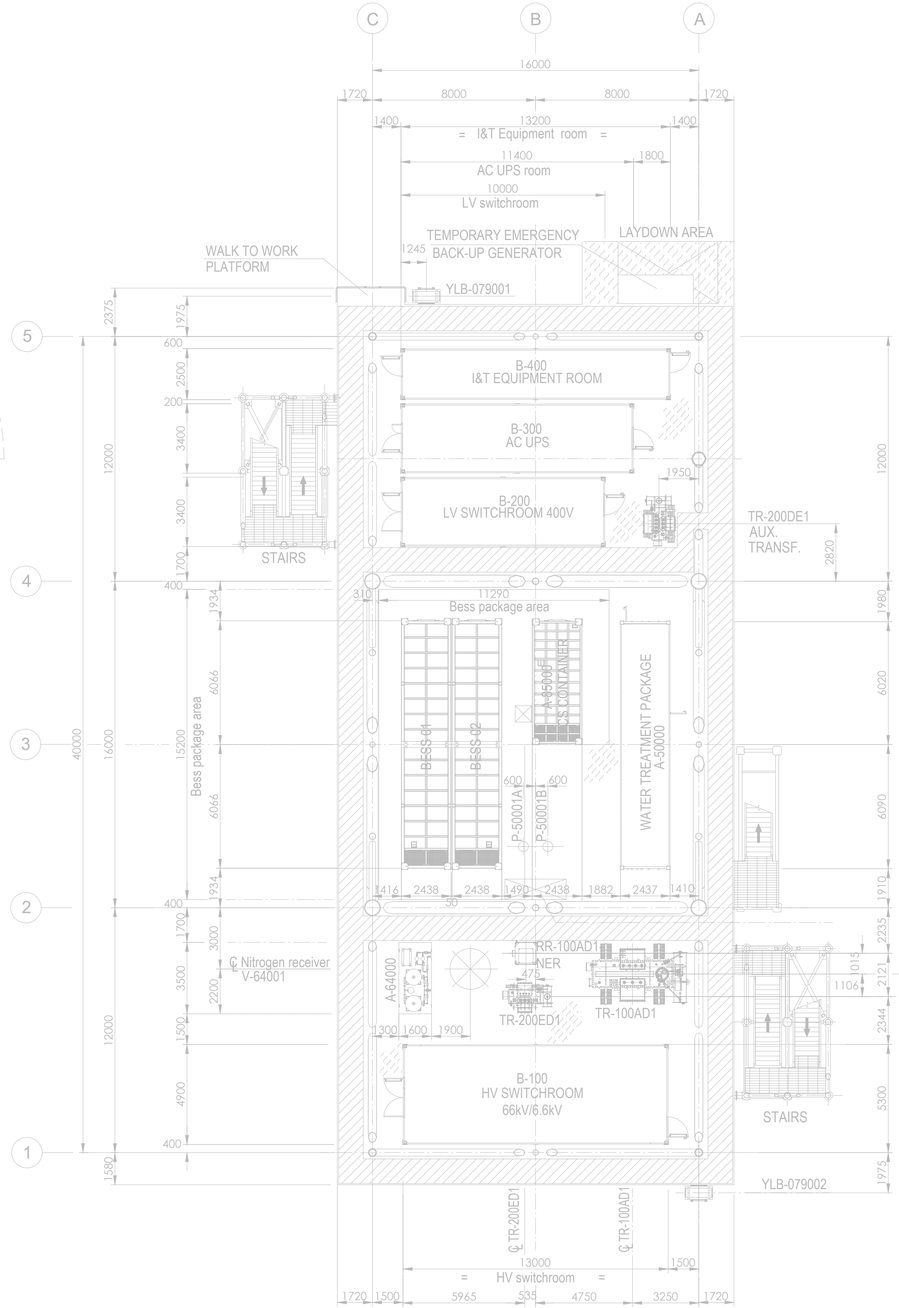
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 01



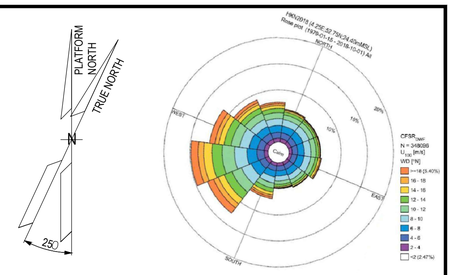
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

01

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

01

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

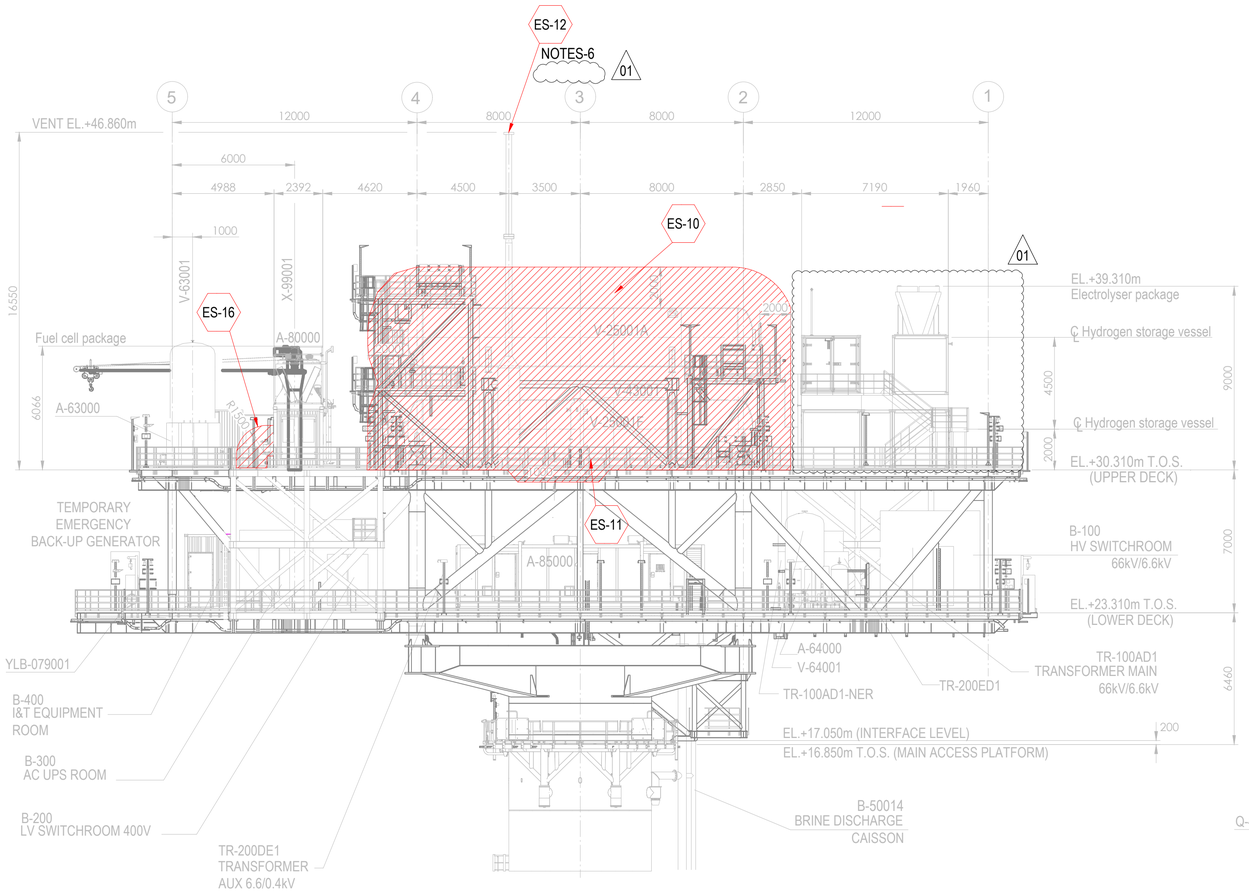
TITLE : BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30022	SHEET 001	REV. 01

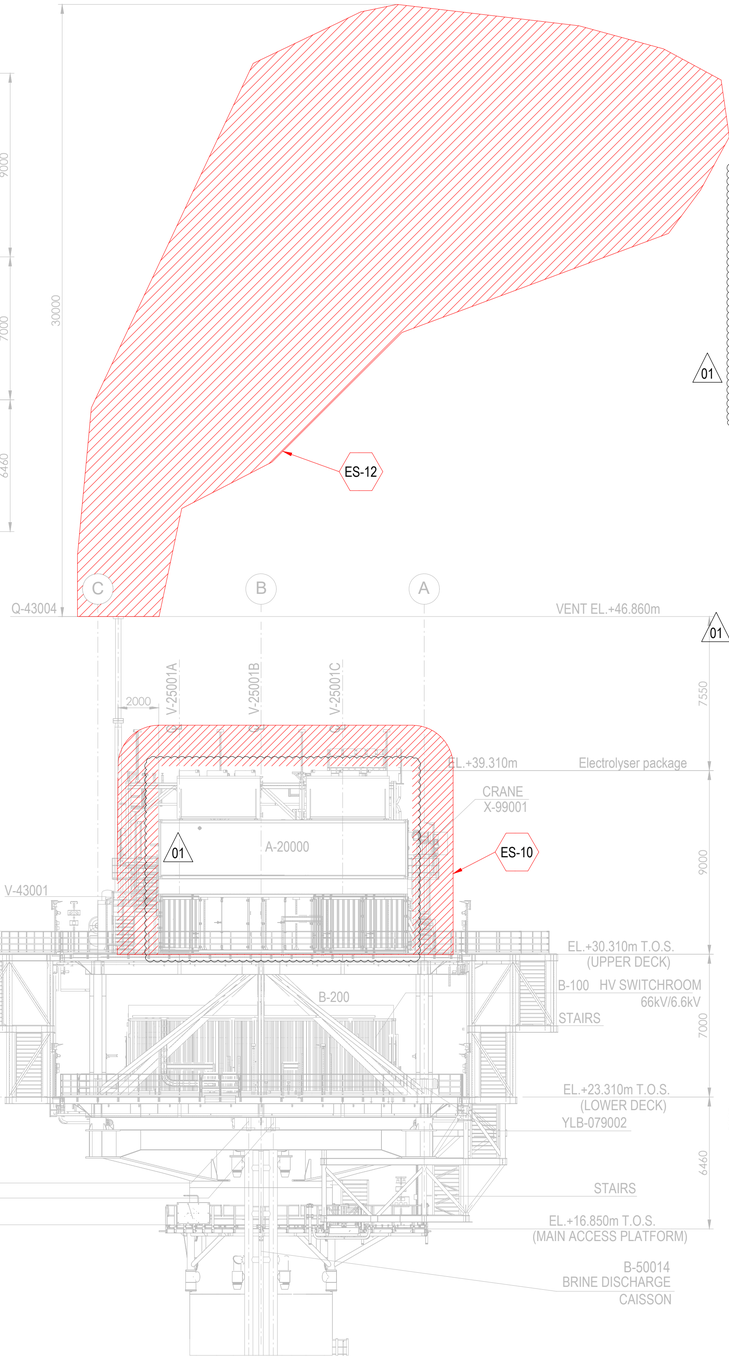
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 01



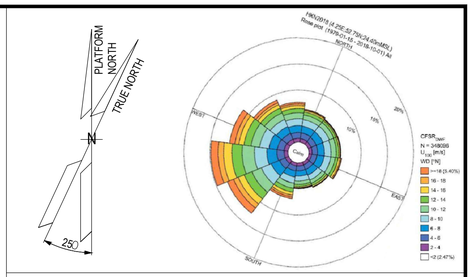
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

01

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. (ES12) IS SHOWN ONLY ON ELEVATION LOOKING NORTH ON THIS LAYOUT
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

01

LEGEND

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30024	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30024 Rev.01

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm.

EJB-200N1-08-L1-01 — TYPE: L21E1
- P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
- P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm.

EJB-200N1-08-L1-07 — TYPE: L21E1
- P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
- P-EJB-200N1-08-L1-06 — 4G4_E Arm.
- P-EJB-200N1-08-L1-03 — 4G4_E Arm.

EJB-200N1-08-L1-06 — TYPE: L21E1
- P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
- P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06

EJB-200N1-08-L1-05 — TYPE: L21E1
- P-EJB-200N1-08-L1-05 — 4G4_E Arm.
- P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
- P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

EJB-200N1-08-L1-16 — TYPE: L21E1
- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm.

EJB-200N1-08-L1-17 — TYPE: L21E1
- P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
- P-EJB-200N1-08-L1-18 — 4G4_E Arm.

EJB-200N1-08-L1-18 — TYPE: L21E1
- P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
- P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25
- P-EJB-200N1-08-L1-19 — 4G4_E Arm.

EJB-200N1-08-L1-19 — TYPE: L21E1
- P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
- P-EJB-200N1-08-L1-15 — 4G4_E Arm.

EJB-200N1-08-L1-15 — TYPE: L21E1
- P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
- P-EJB-200N1-08-L1-14 — 4G4_E Arm.

EJB-200N1-08-L1-14 — TYPE: L21E1
- P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

P-EJB-200N1-08-L1-12 — 4G4_E Arm.

EJB-200N1-08-L1-12 — TYPE: L21E1
- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

EJB-200N1-08-L1-11 — TYPE: L21E1
- P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
- P-EJB-200N1-08-L1-10 — 4G4_E Arm.

EJB-200N1-08-L1-10 — TYPE: L21E1
- P-EJB-200N1-08-L1-20 — 4G4_E Arm. → EJB-200N1-08-L1-20 — TYPE: L21E1
  - P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22
- P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12

EJB-200N1-08-L1-03 — TYPE: L21E1
- P-EJB-200N1-08-L1-09 — 4G4_E Arm.

EJB-200N1-08-L1-09 — TYPE: L21E1
- P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
- P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11

EJB-200N1-08-L1-08 — TYPE: L21E1
- P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
- P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DG-20125 | SHEET 011 | REV. 01

F.to UNI A3: 420mmx297mm

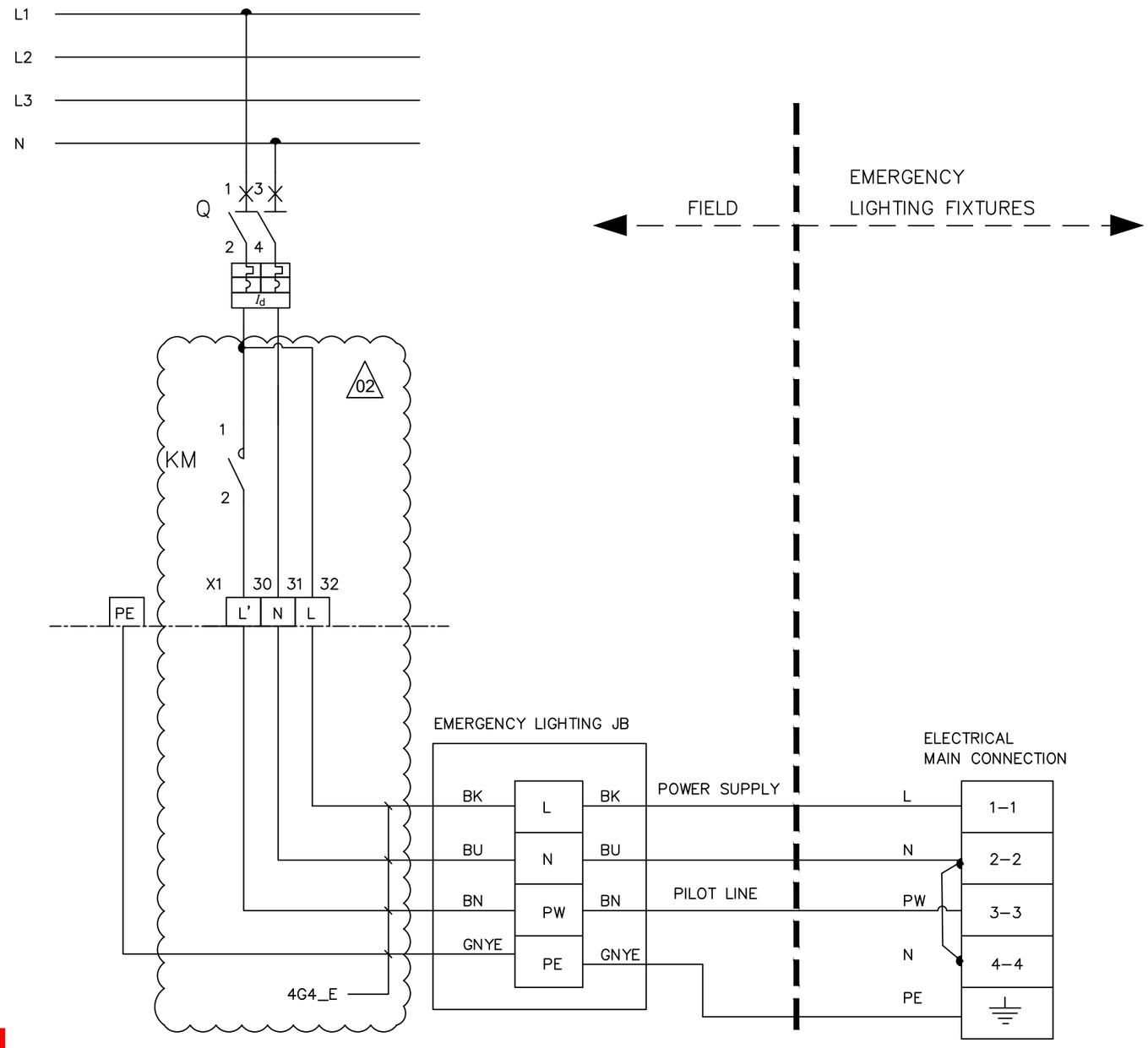
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

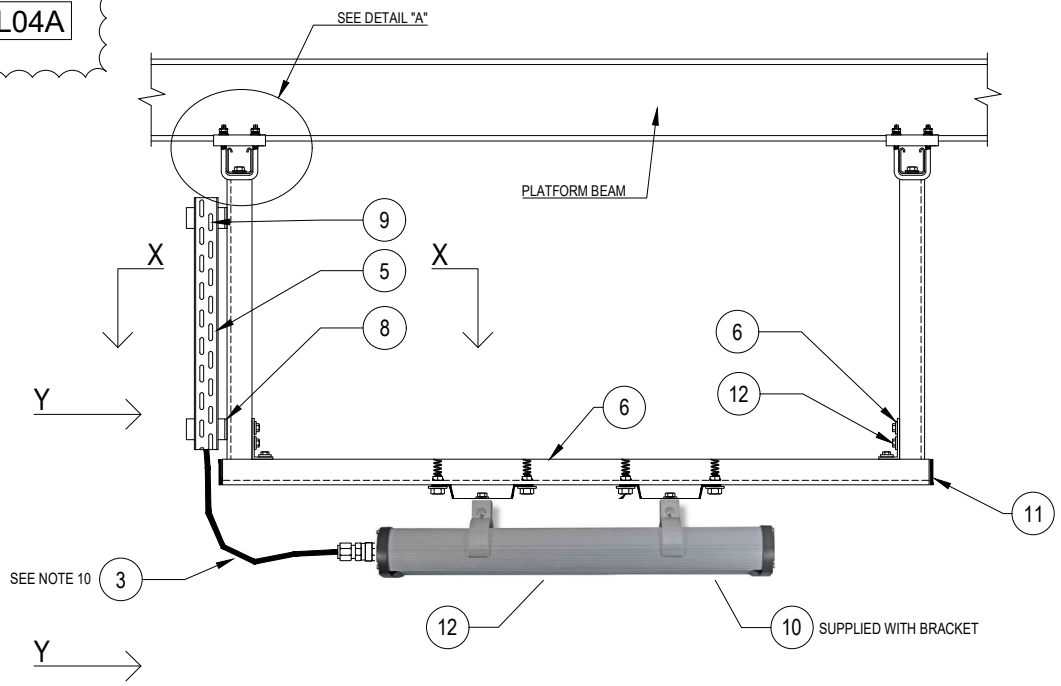
SHEET 014

REV. 02

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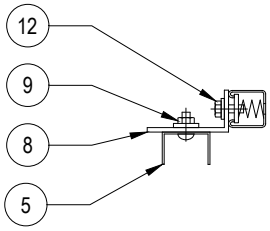
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L04A

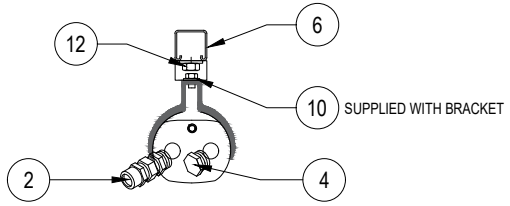


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex e) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		1	NOTE 2 NOTE 5
3	ARMOURED/UNARMOURED CABLE				NOTE 5
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE LADDER OR PERFORATED TRAY	AISI 316L		AS REQ.	
6	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2	AS REQ.	
7	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE	AISI 316L		2	NOTE 4
8	PLATE FOR ORTHOGONAL-TRASVERSAL CONNECTION (3 HOLES)	LPDE		4	
9	ROUND HEAD SCREW WITH SQUARE NECK COMPLETE WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L			
10	HEX. BOLT M8X16 WITH LARGE PLANE WASHER	AISI 316L		2	
11	PLUG FOR U-CHANNEL	LPDE		2	
12	HEX. BOLT M10X30 WITH PLANE WASHER, NUT FOR U-CHANNEL AND SPRING	AISI 316L		2	

SECTION "X-X"

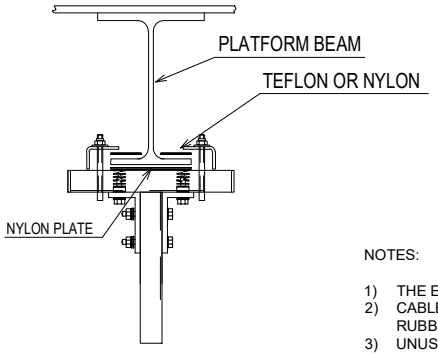


SECTION "Y-Y"

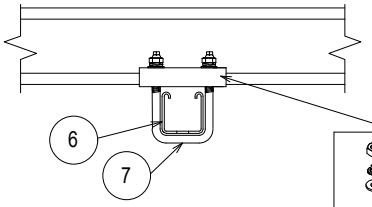


lighting fixture
Cortem LIFEX

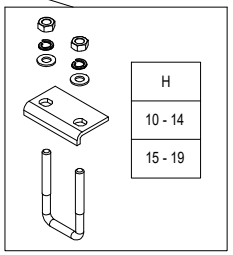
02



DETAIL "A"



VIEW "A"



NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.
5) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
FIXTURE SUSPENSION MOUNTED WITH U–CHANNEL SUPP.

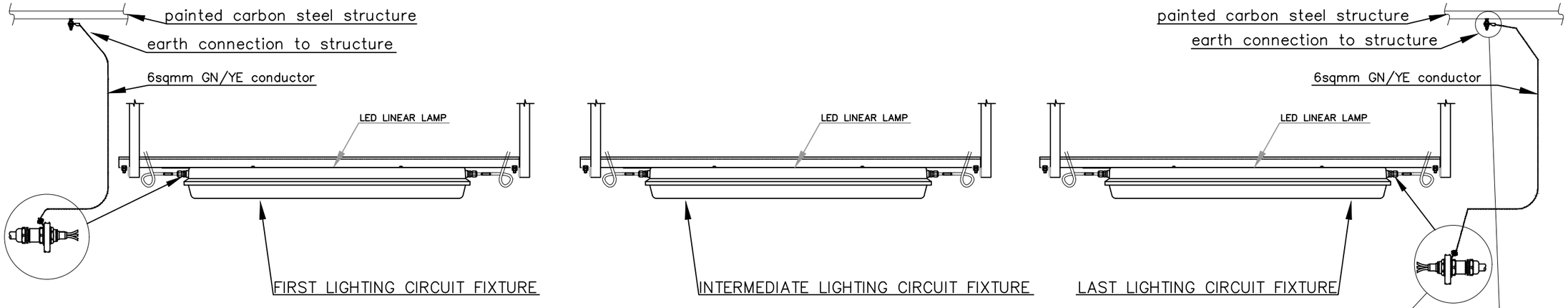
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 006 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

E32

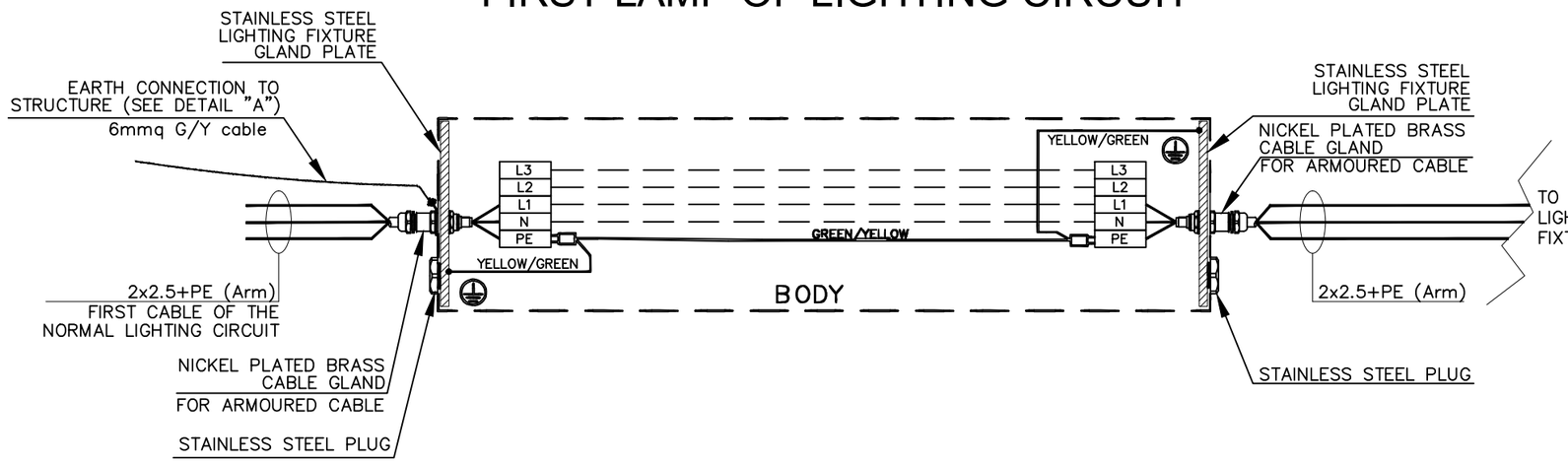


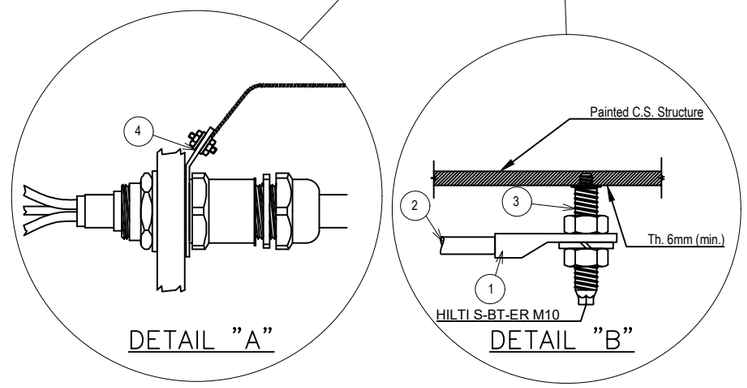
ONLY the first and the last lighting fixture of all circuits are connected to earthing system. The earthing continuity of the intermediate lighting fixtures of the circuits is guaranteed by the using of the first and the last lighting fixture earthing connection which is permanently connected to the earthing system as per the typical below.

Refer also to TYP. "E05" for Lighting Fixtures.

NORMAL LIGHTING CIRCUIT EARTHING CONTINUITY TYPICAL

FIRST LAMP OF LIGHTING CIRCUIT





POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			
2	Y/G INSULATING COPPER CONDUCTOR		6sqmm	ASR	
3	HILTI S-BT-ER M10/15 SN6 C/W NUTS AND GROWER	AISI 316L	M10X28		NOTE 1
4	CABLE GLAND EARTH TAG	NPB	M20		

The same logic is used for the earthing continuity of Emergency Lighting Circuits. The above typical has been done to represent the Earthing Continuity of G/Y conductors, the correct connections of all conductors in the respective Terminal Strips are shown in doc. AR-FEN-10-ROEC-600132 Lighting and Socket Circuit Diagrams.

NOTES:
1) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM FOR SINGLE EQUIPMENTS EARTHING CONNECTION.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING – OUTDOOR LINEAR LIGHTING FIXTURE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 023 | REV. 02

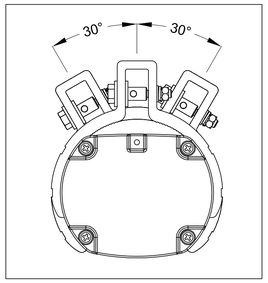
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

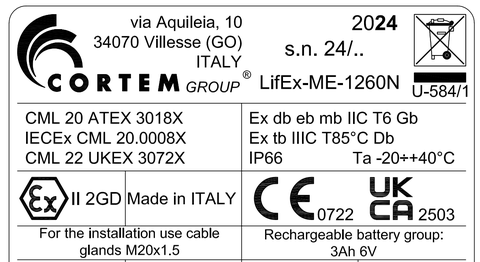
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



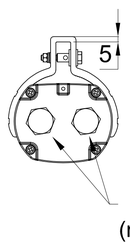
LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

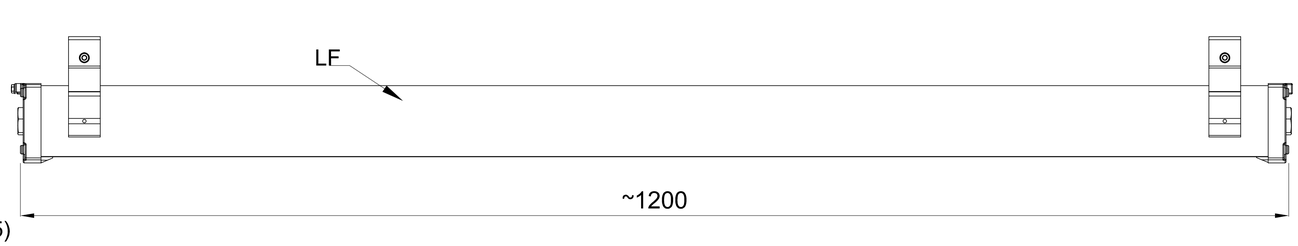
CERTIFICATE NAMEPLATE



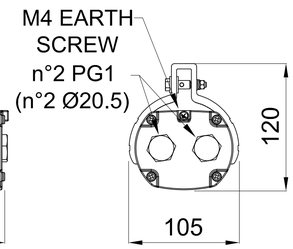
LEFT SIDE (OUT)



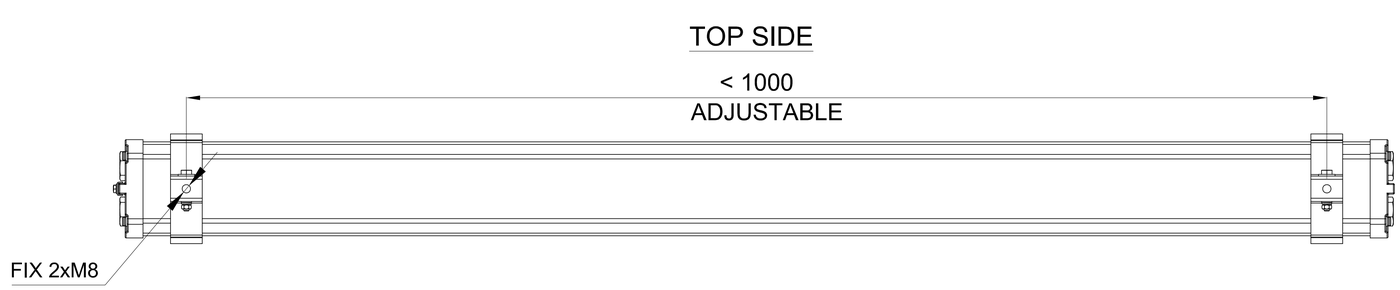
FRONT SIDE



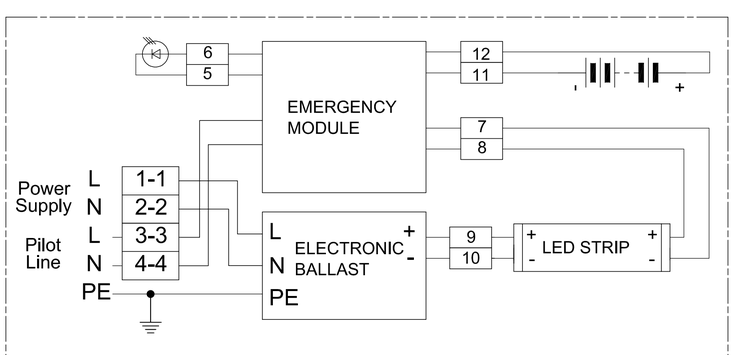
RIGHT SIDE (IN)



TOP SIDE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / NEXT /
TOT. 2

CORTEM GROUP
cortem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

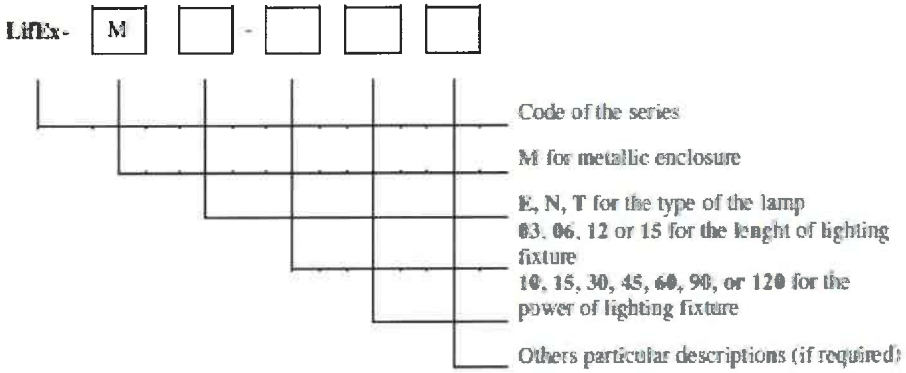
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

ITEM	Tag	ELF-200N1-08-L1-03 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001679	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	PL	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-03	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001679		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	PL	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-03	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001679		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

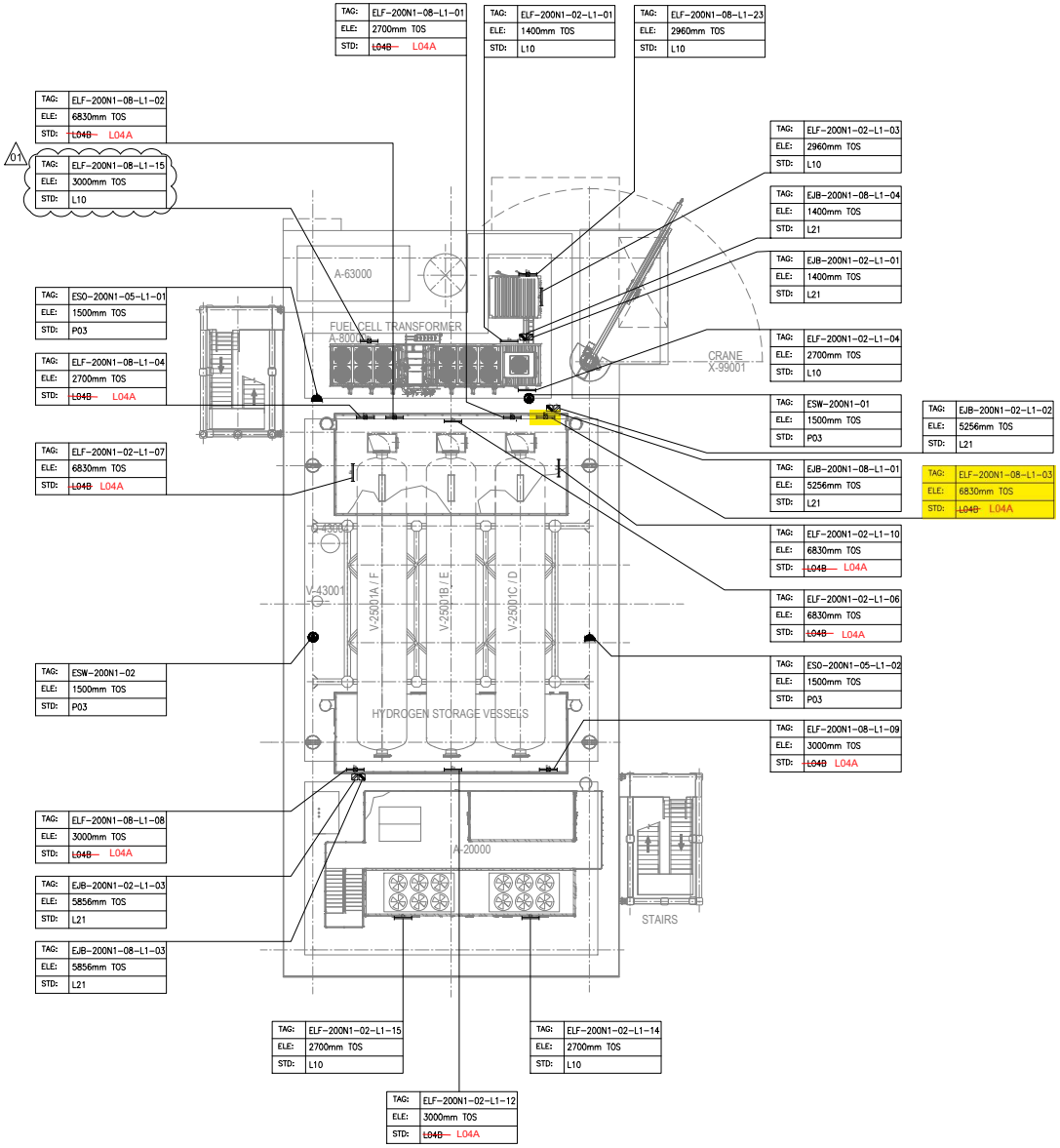
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Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

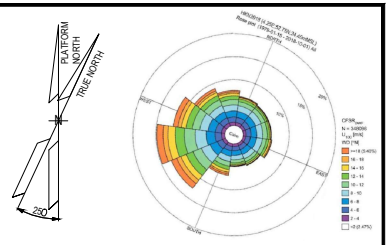
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:38:28.540Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-16T09:06:30.659Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

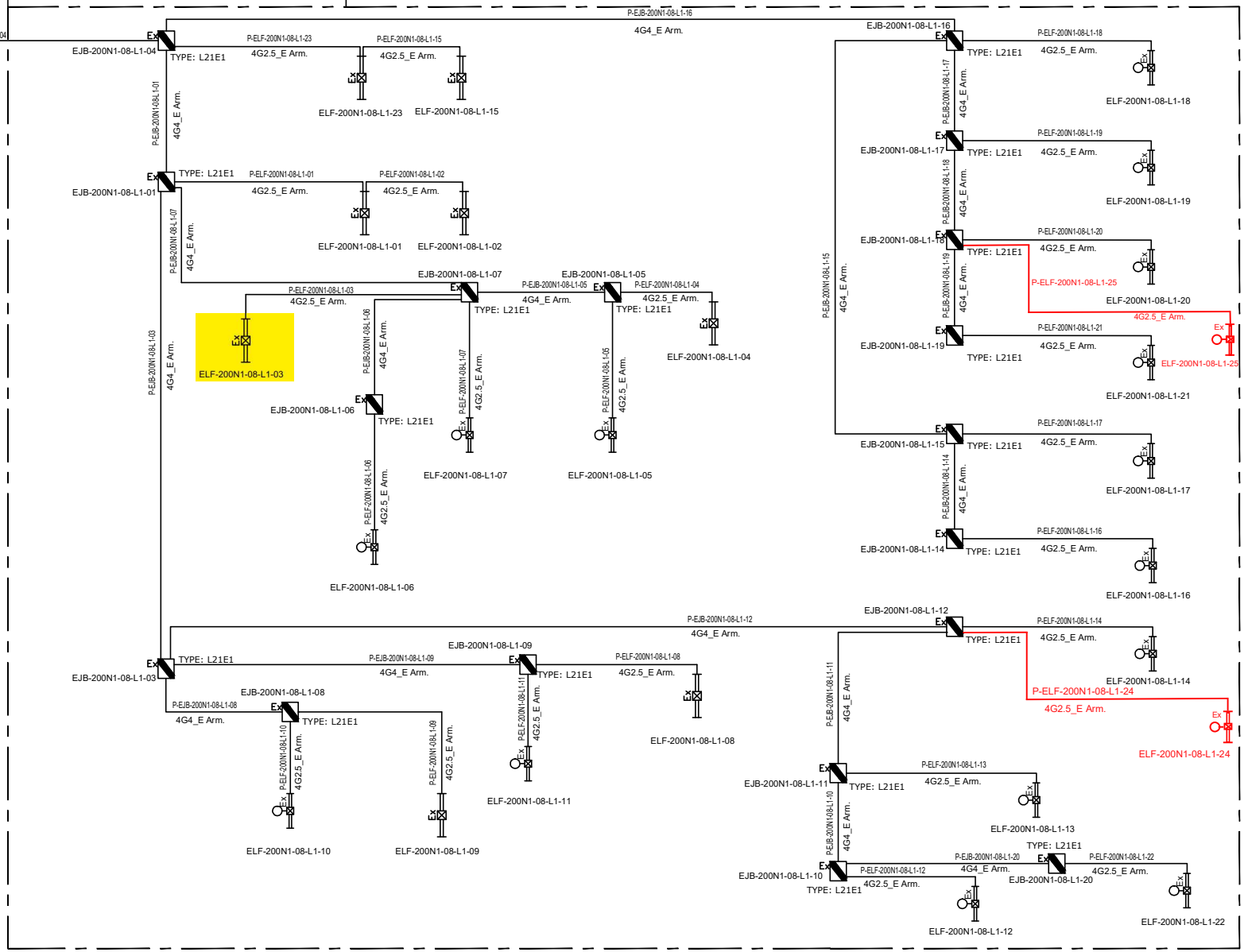
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DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 011 | REV. 01

F.to UNI A3: 420mmx297mm

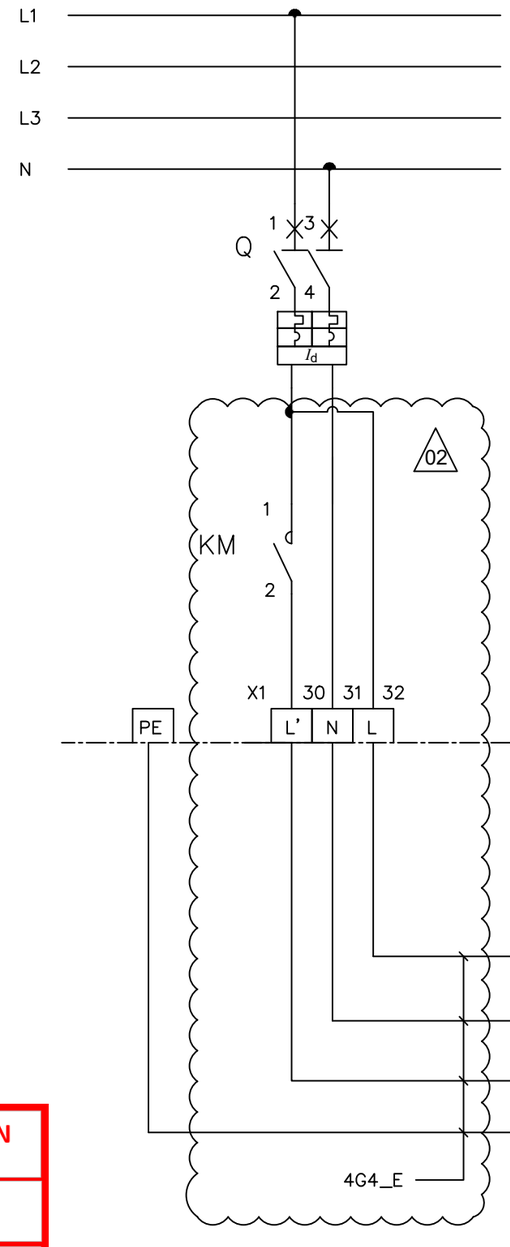
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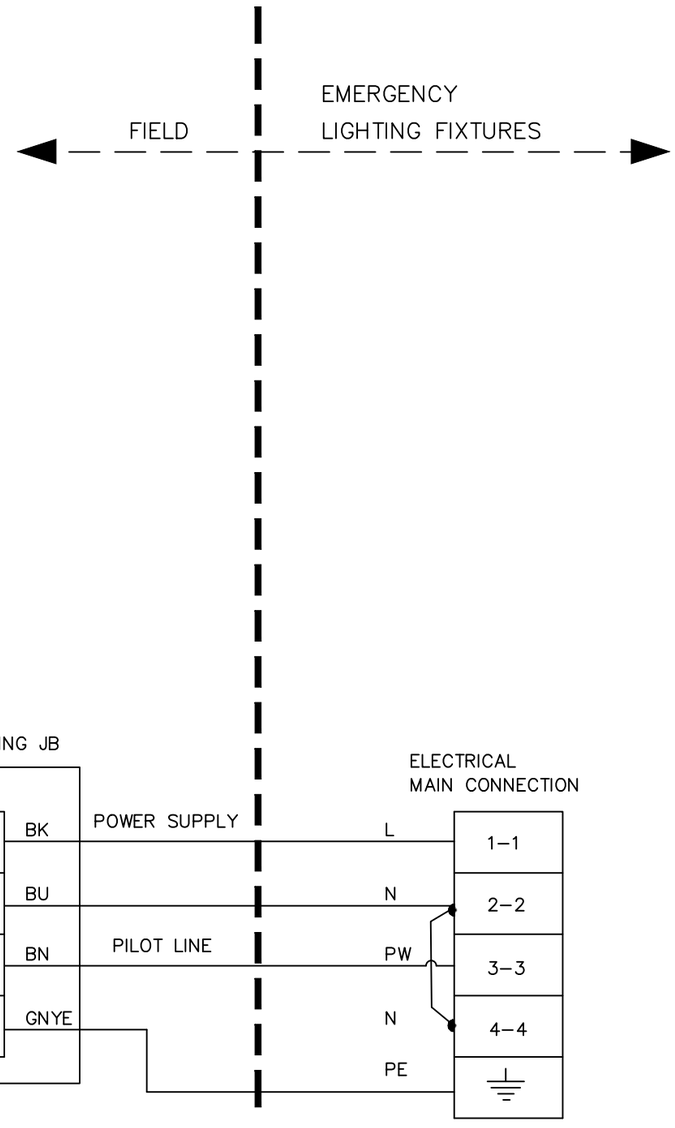
CROSSWIND

ROSETTI MARINO

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz





L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

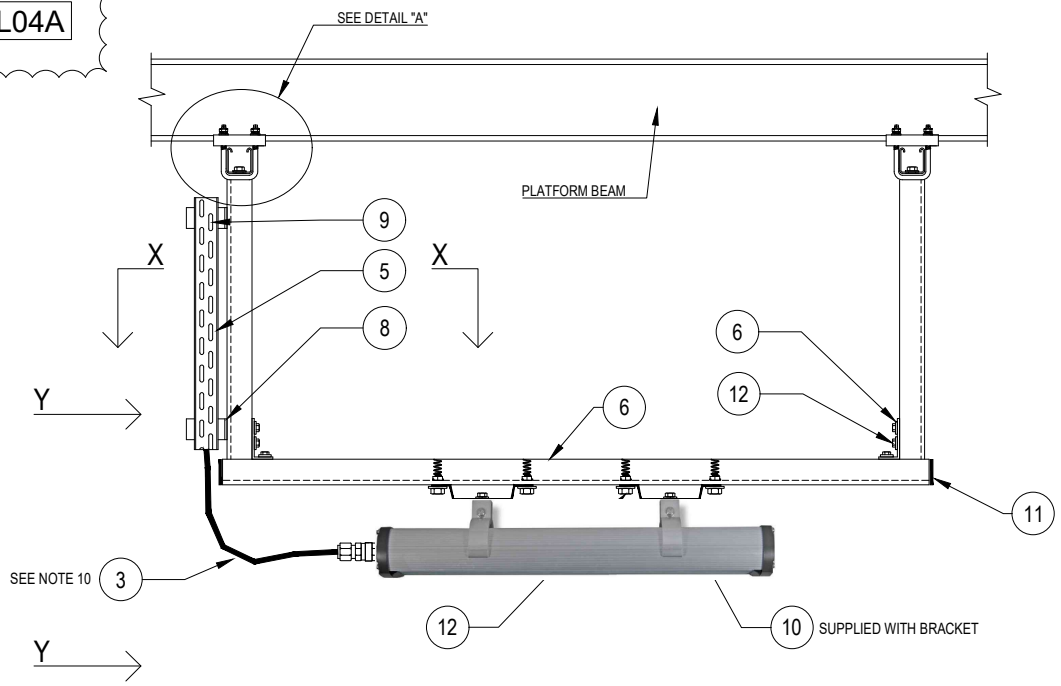
CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

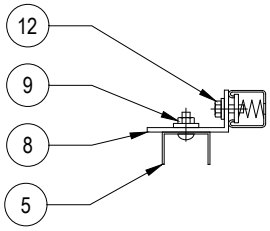
File Name : 123A90–DDL–EL–DG–20125

L04A

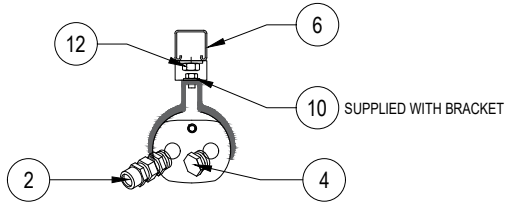


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex e) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		1	NOTE 2 NOTE 5
3	ARMOURED/UNARMOURED CABLE				NOTE 5
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE LADDER OR PERFORATED TRAY	AISI 316L		AS REQ.	
6	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2	AS REQ.	
7	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE	AISI 316L		2	NOTE 4
8	PLATE FOR ORTHOGONAL-TRASVERSAL CONNECTION (3 HOLES)	LPDE		4	
9	ROUND HEAD SCREW WITH SQUARE NECK COMPLETE WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L			
10	HEX. BOLT M8X16 WITH LARGE PLANE WASHER	AISI 316L		2	
11	PLUG FOR U-CHANNEL	LPDE		2	
12	HEX. BOLT M10X30 WITH PLANE WASHER, NUT FOR U-CHANNEL AND SPRING	AISI 316L		2	

SECTION "X-X"

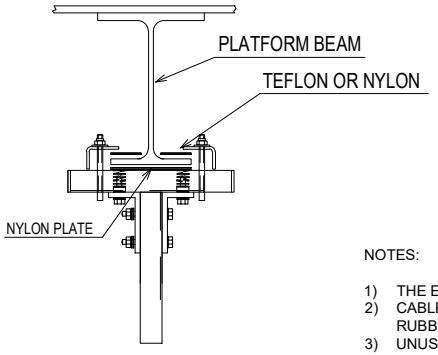


SECTION "Y-Y"

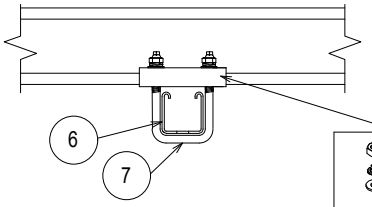


lighting fixture
Cortem LIFEX

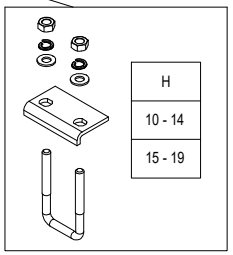
02



DETAIL "A"



VIEW "A"



NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.
5) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
FIXTURE SUSPENSION MOUNTED WITH U–CHANNEL SUPP.

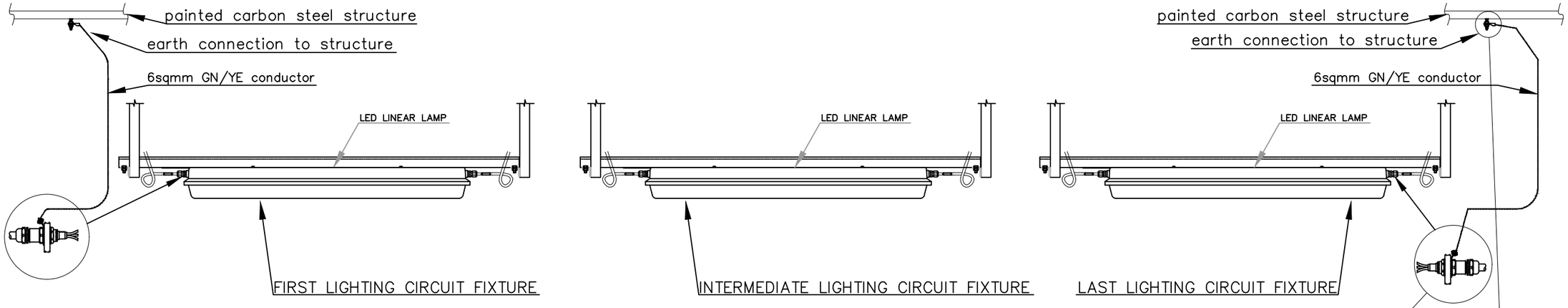
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 006 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

E32

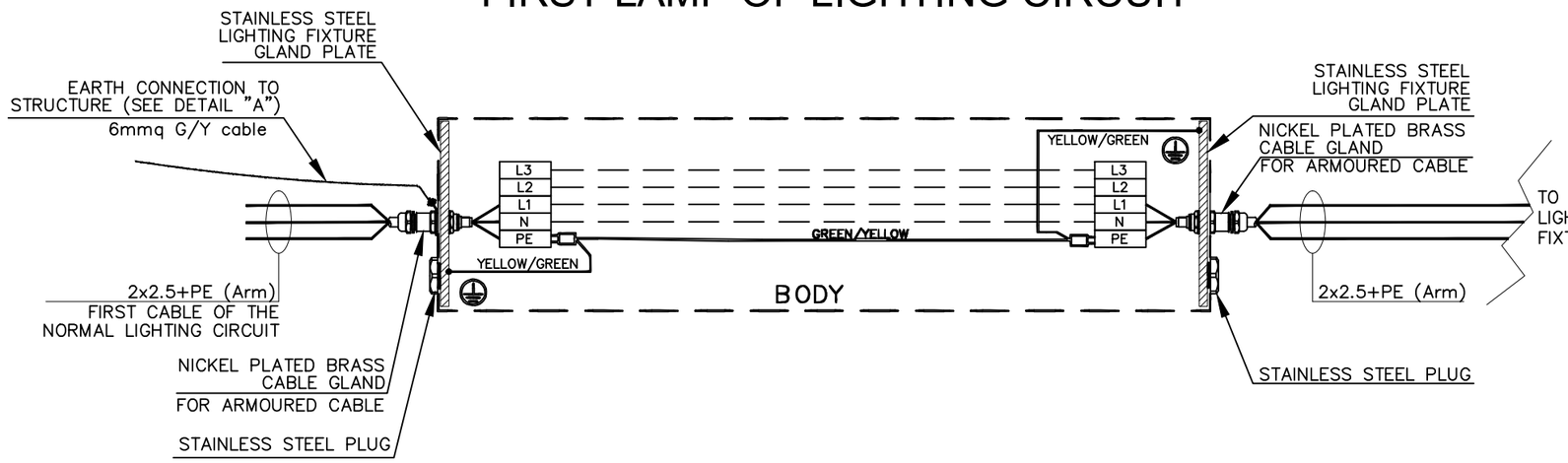


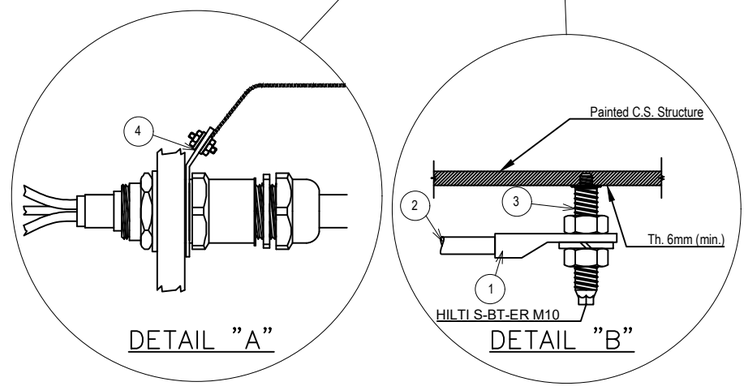
ONLY the first and the last lighting fixture of all circuits are connected to earthing system. The earthing continuity of the intermediate lighting fixtures of the circuits is guaranteed by the using of the first and the last lighting fixture earthing connection which is permanently connected to the earthing system as per the typical below.

Refer also to TYP. "E05" for Lighting Fixtures.

NORMAL LIGHTING CIRCUIT EARTHING CONTINUITY TYPICAL

FIRST LAMP OF LIGHTING CIRCUIT





POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			
2	Y/G INSULATING COPPER CONDUCTOR		6sqmm	ASR	
3	HILTI S-BT-ER M10/15 SN6 C/W NUTS AND GROWER	AISI 316L	M10X28		NOTE 1
4	CABLE GLAND EARTH TAG	NPB	M20		

The same logic is used for the earthing continuity of Emergency Lighting Circuits. The above typical has been done to represent the Earthing Continuity of G/Y conductors, the correct connections of all conductors in the respective Terminal Strips are shown in doc. AR-FEN-10-ROEC-600132 Lighting and Socket Circuit Diagrams.

NOTES:
1) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM FOR SINGLE EQUIPMENTS EARTHING CONNECTION.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING – OUTDOOR LINEAR LIGHTING FIXTURE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 023 | REV. 02

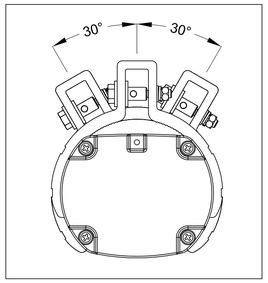
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

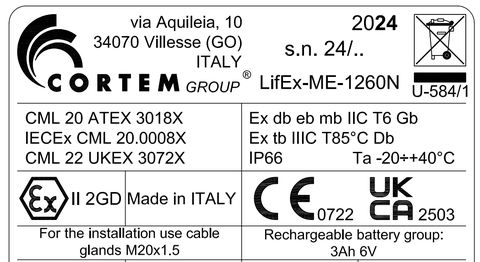
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



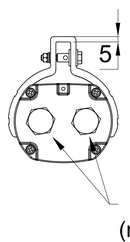
LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

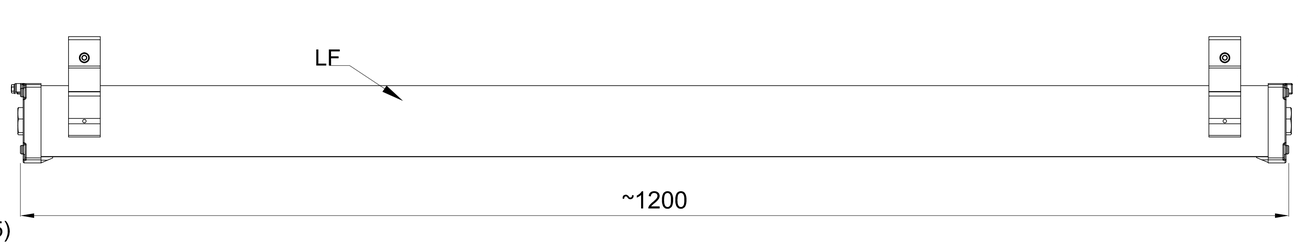
CERTIFICATE NAMEPLATE



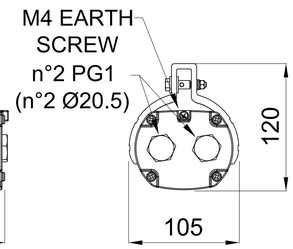
LEFT SIDE (OUT)



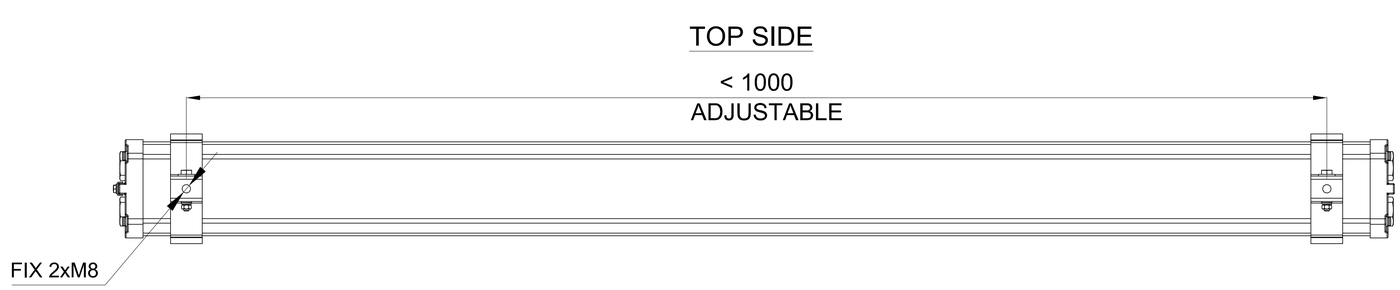
FRONT SIDE



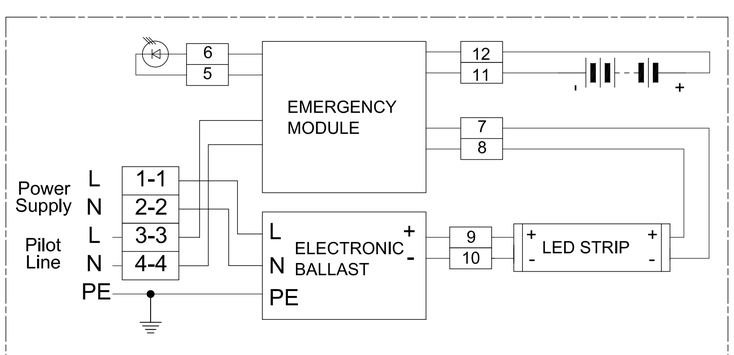
RIGHT SIDE (IN)



TOP SIDE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / NEXT /
TOT. 2

CORTEM GROUP
cortem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

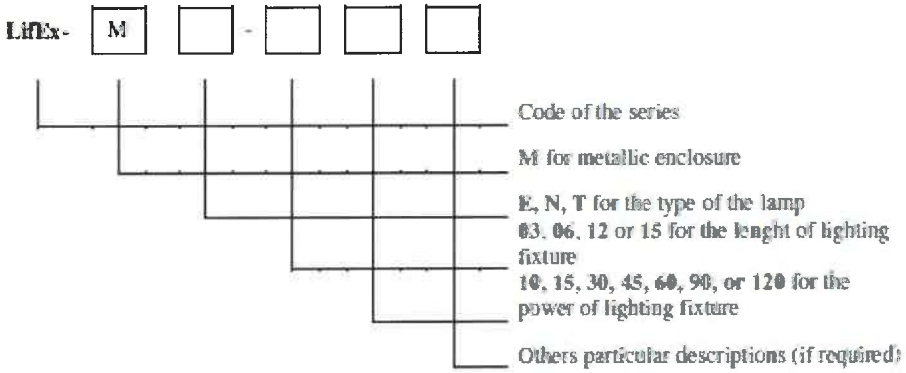
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

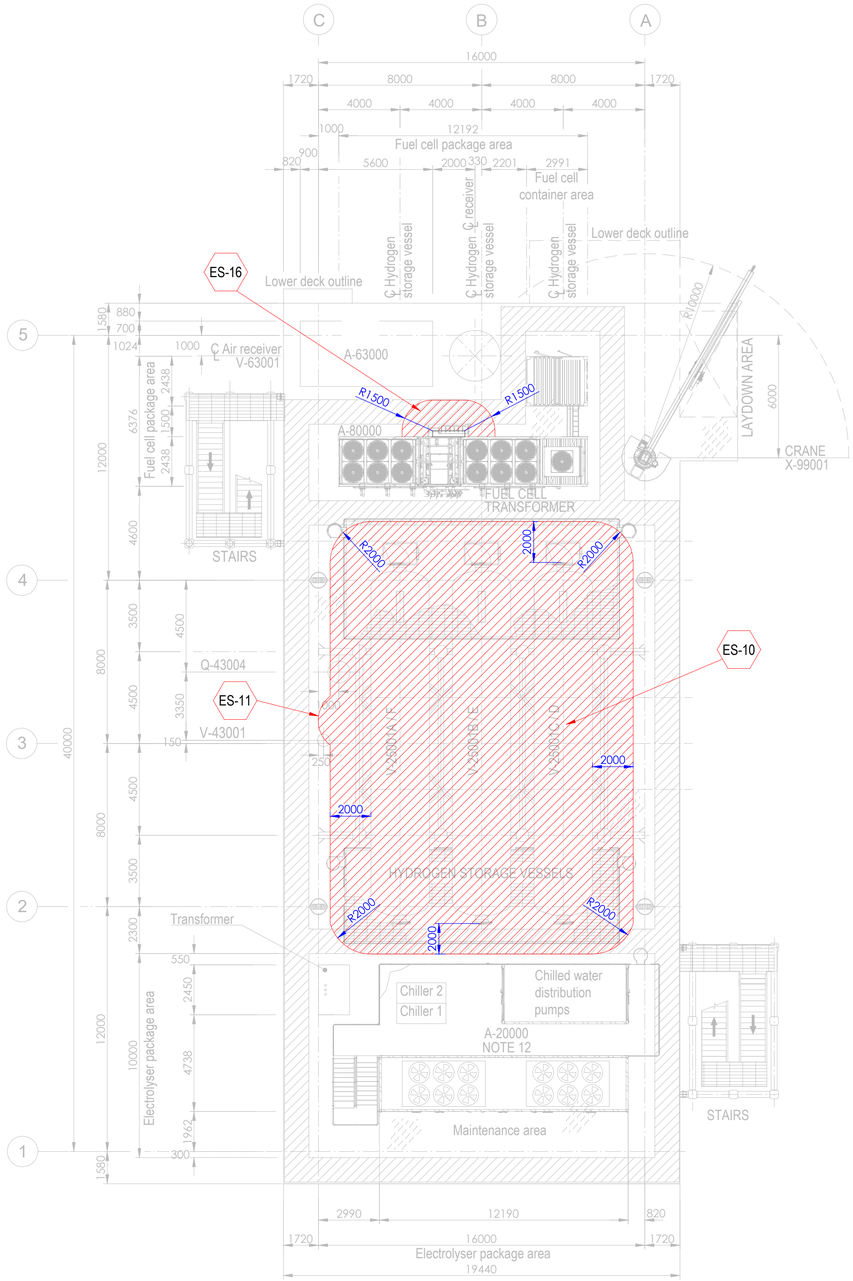
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

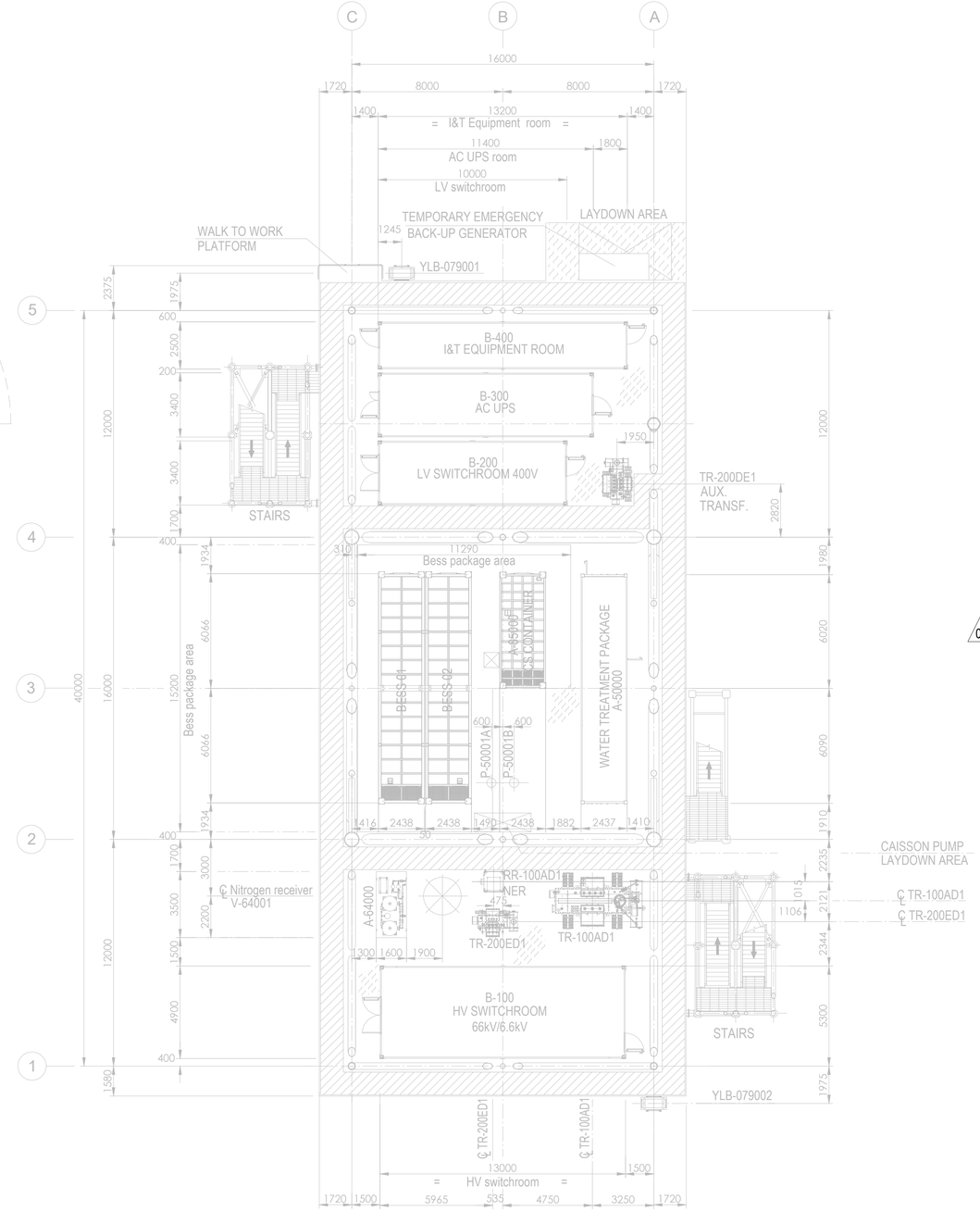
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



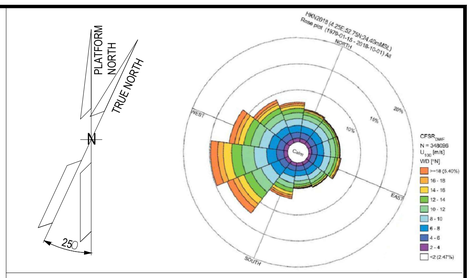
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

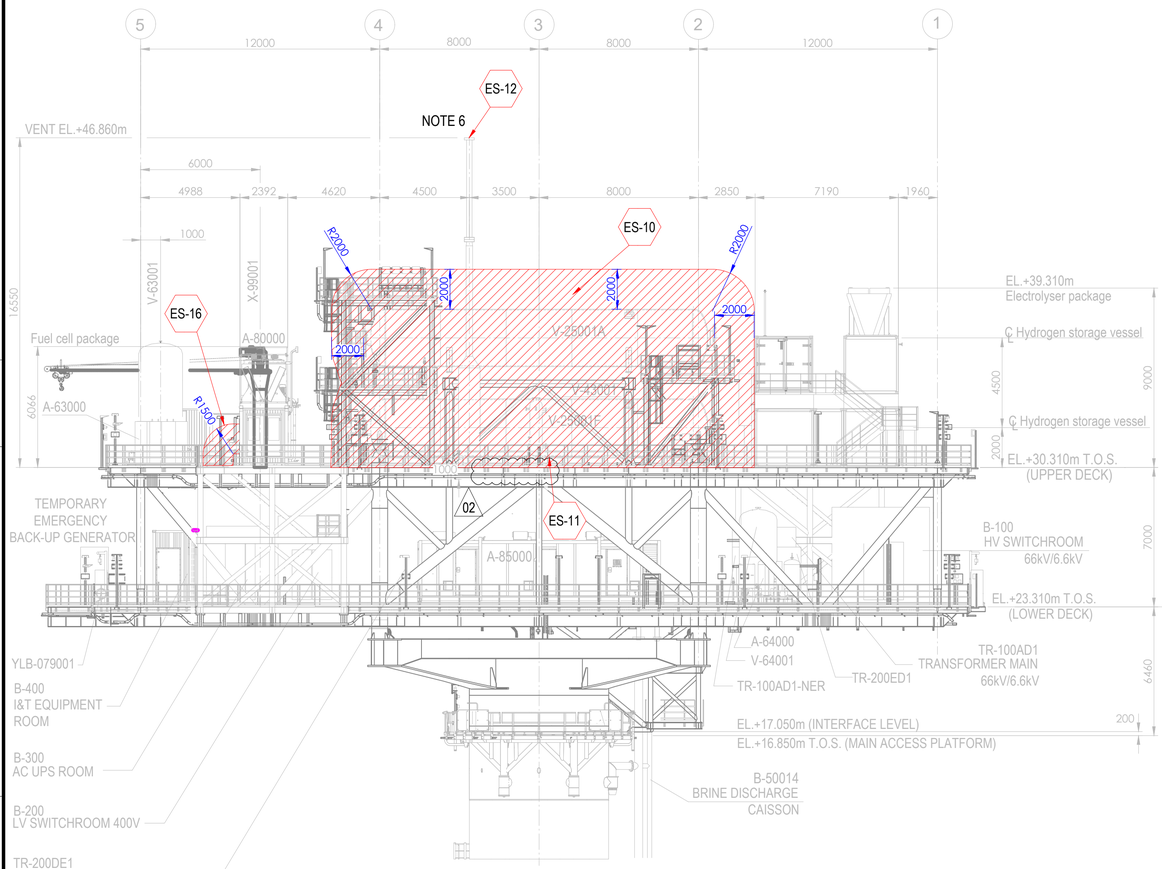
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

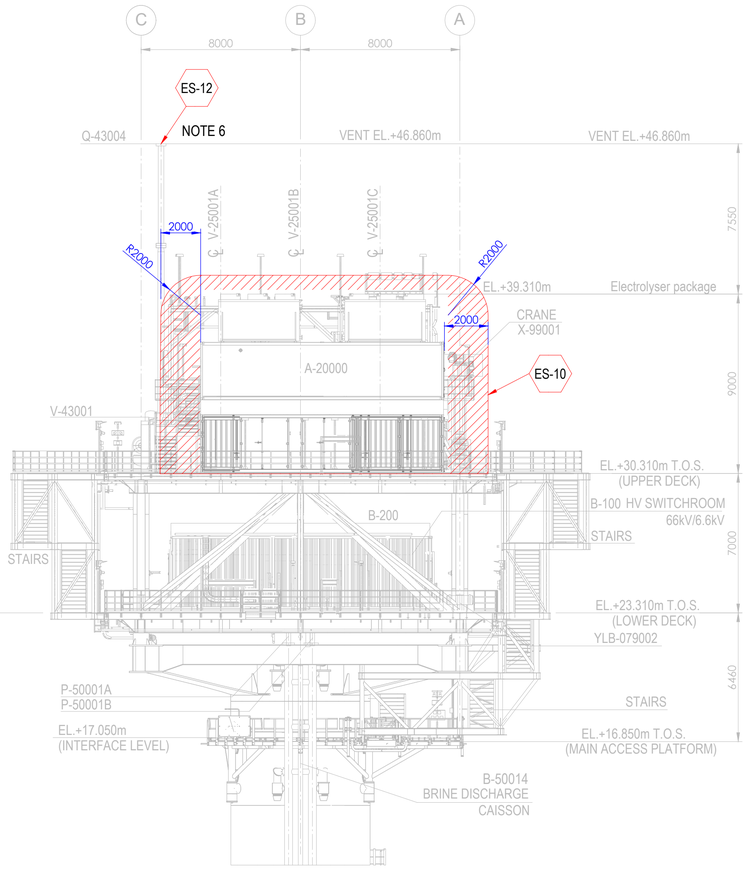
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

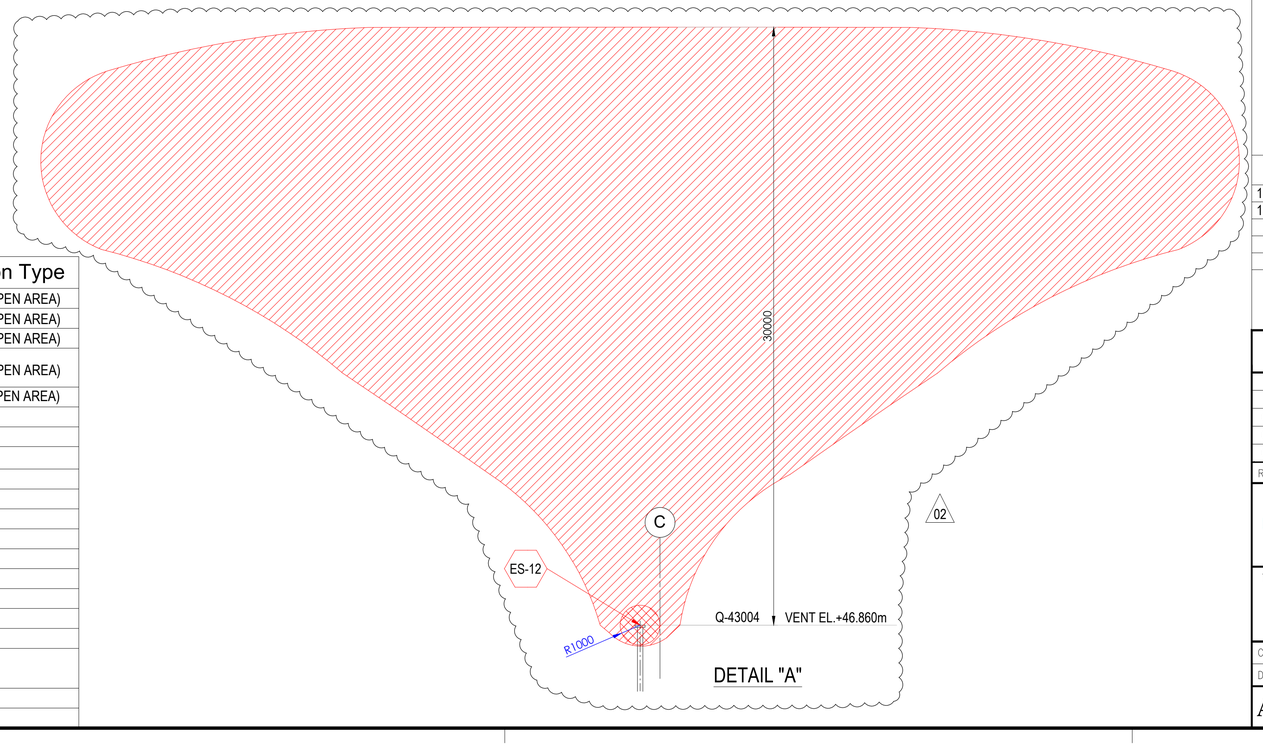


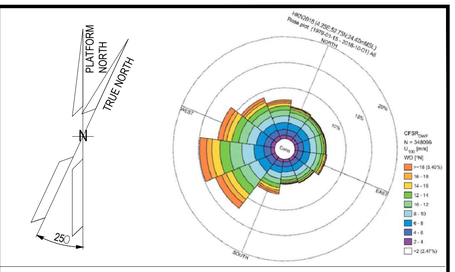
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-04 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001680	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-04	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001680		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	PL	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-04	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001680		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

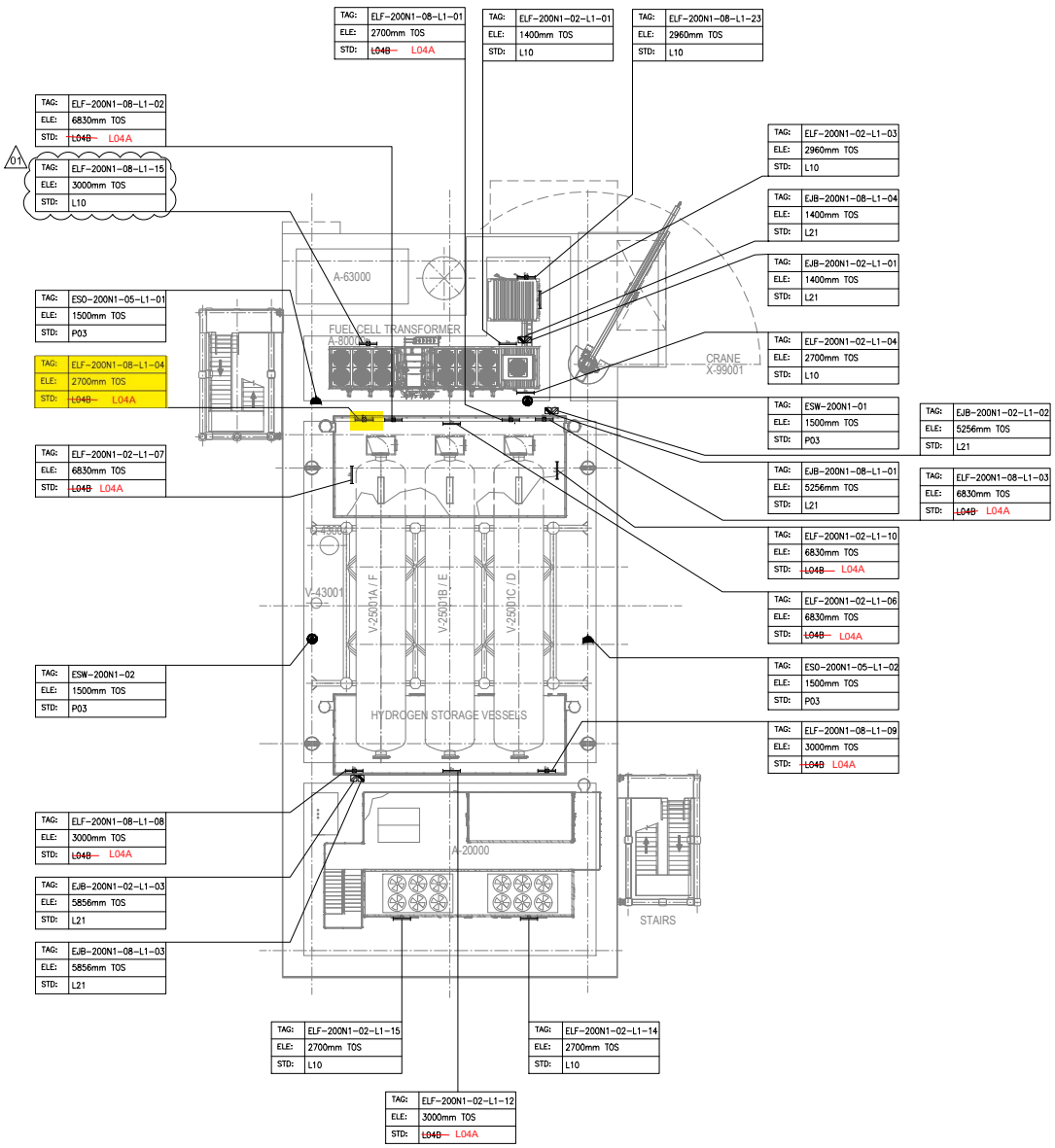
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

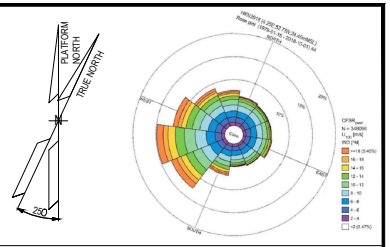
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-10	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-10T06:38:42.717Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-16T07:53:39.755Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

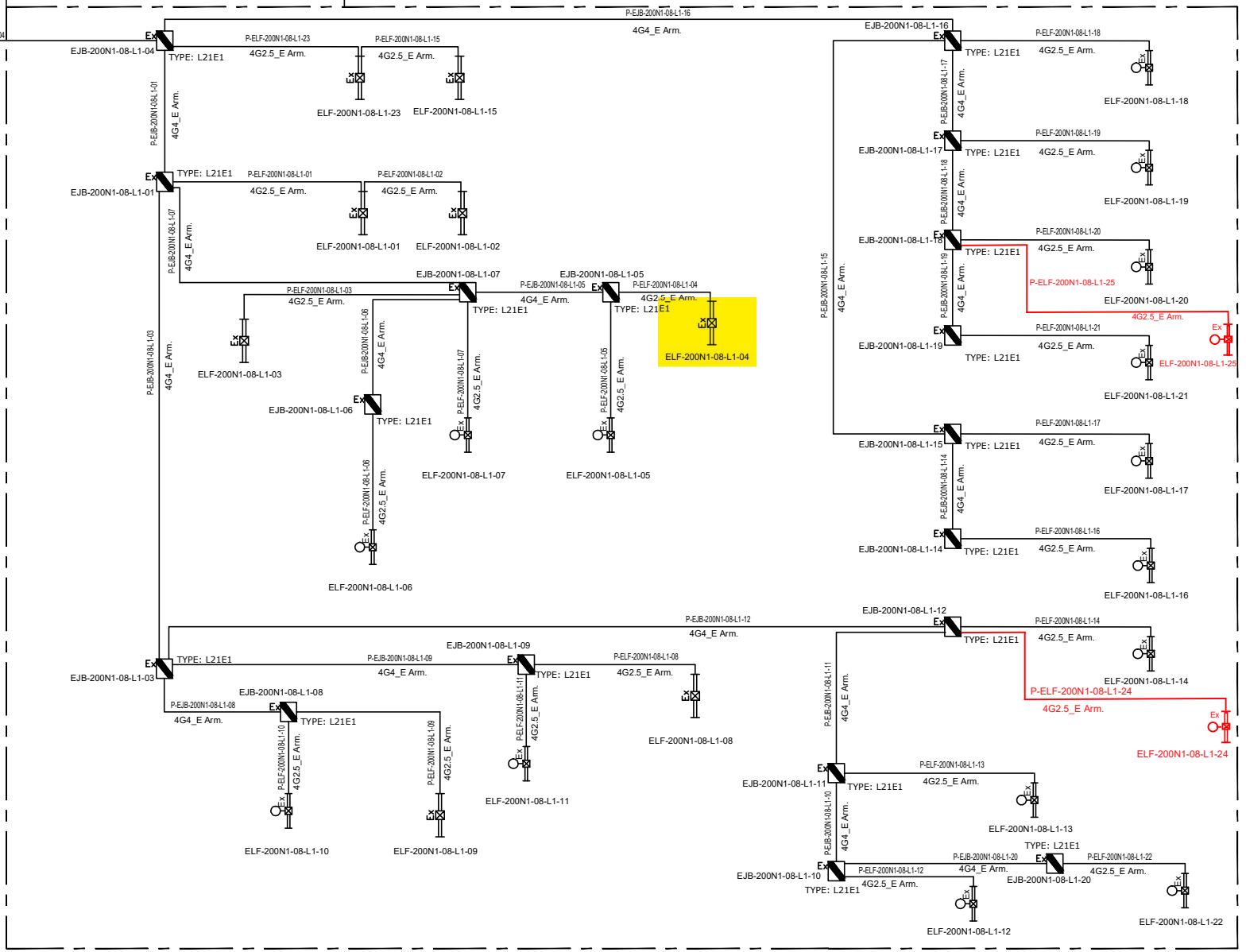
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 011 | REV. 01

F.to UNI A3: 420mmx297mm

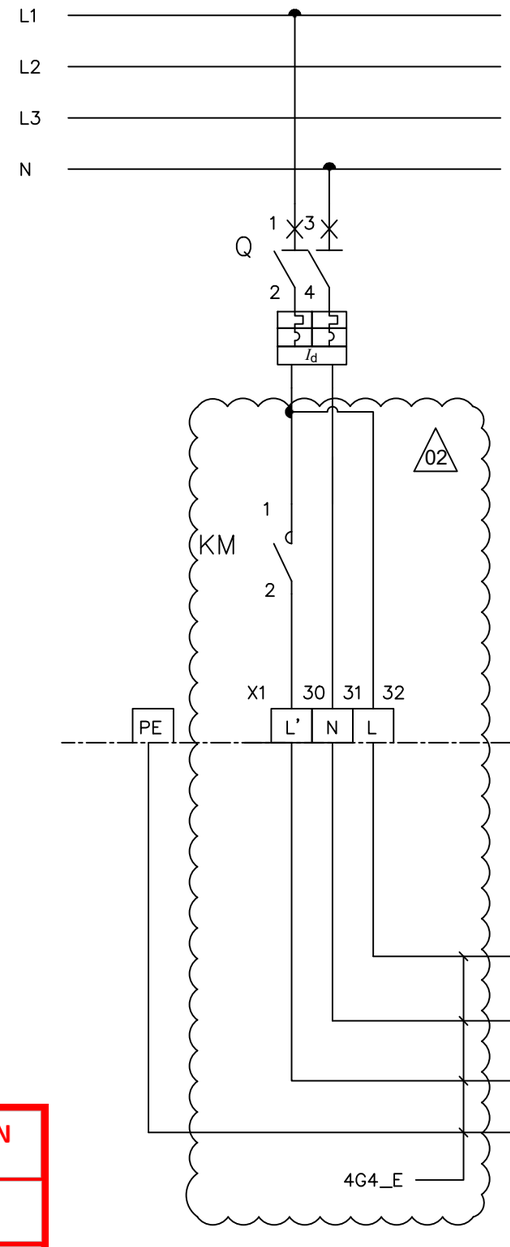
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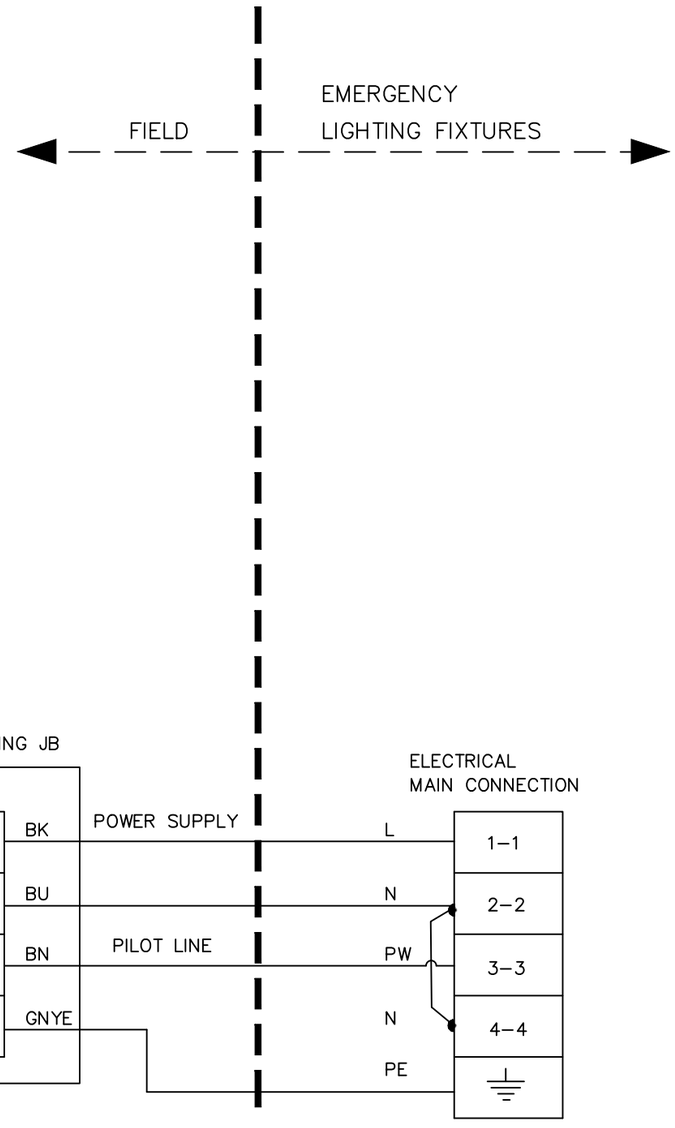
CROSSWIND

ROSETTI MARINO

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz





L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

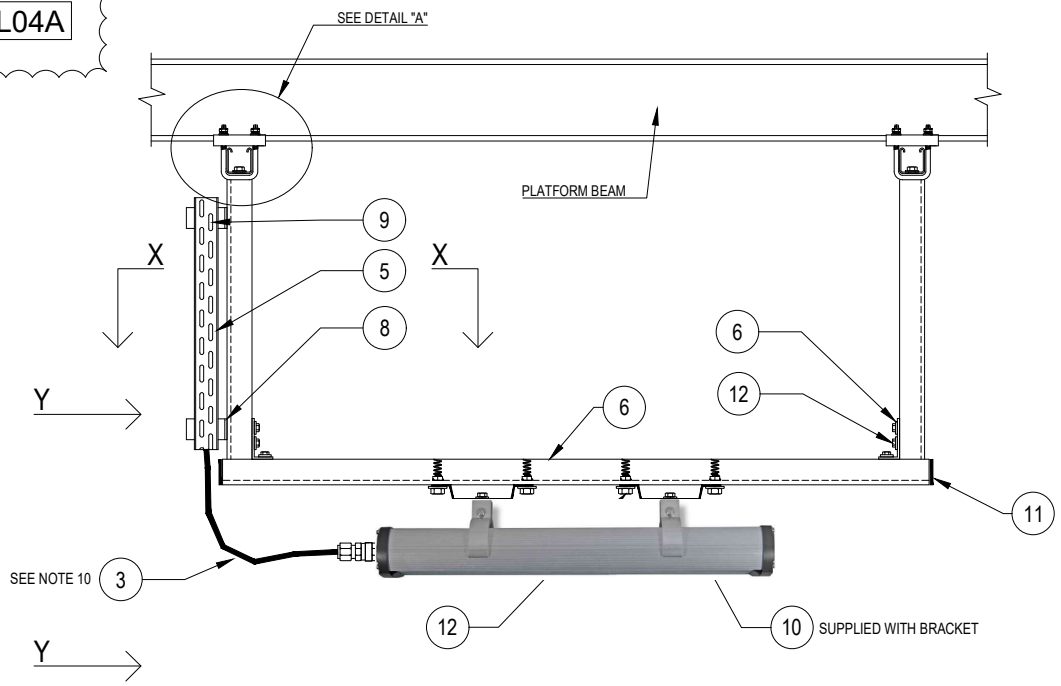
CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

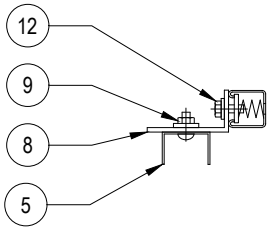
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L04A

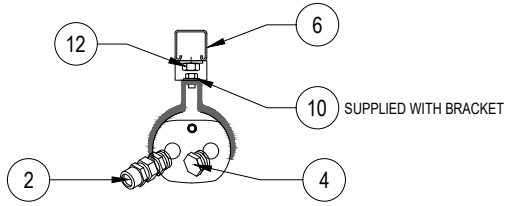


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex e) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		1	NOTE 2 NOTE 5
3	ARMOURED/UNARMOURED CABLE				NOTE 5
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE LADDER OR PERFORATED TRAY	AISI 316L		AS REQ.	
6	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2	AS REQ.	
7	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE	AISI 316L		2	NOTE 4
8	PLATE FOR ORTHOGONAL-TRASVERSAL CONNECTION (3 HOLES)	LPDE		4	
9	ROUND HEAD SCREW WITH SQUARE NECK COMPLETE WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L			
10	HEX. BOLT M8X16 WITH LARGE PLANE WASHER	AISI 316L		2	
11	PLUG FOR U-CHANNEL	LPDE		2	
12	HEX. BOLT M10X30 WITH PLANE WASHER, NUT FOR U-CHANNEL AND SPRING	AISI 316L		2	

SECTION "X-X"

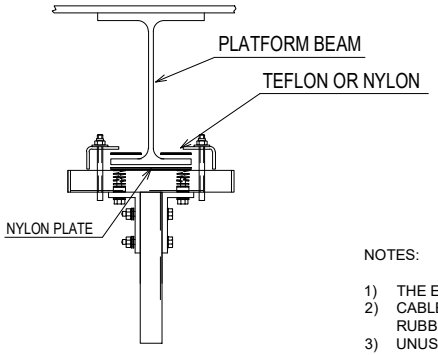


SECTION "Y-Y"

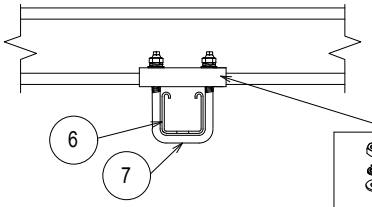


lighting fixture
Cortem LIFEX

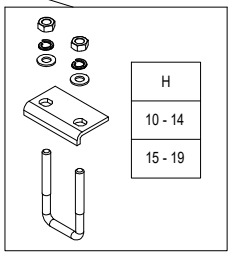
02



DETAIL "A"



VIEW "A"



NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.
5) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
FIXTURE SUSPENSION MOUNTED WITH U–CHANNEL SUPP.

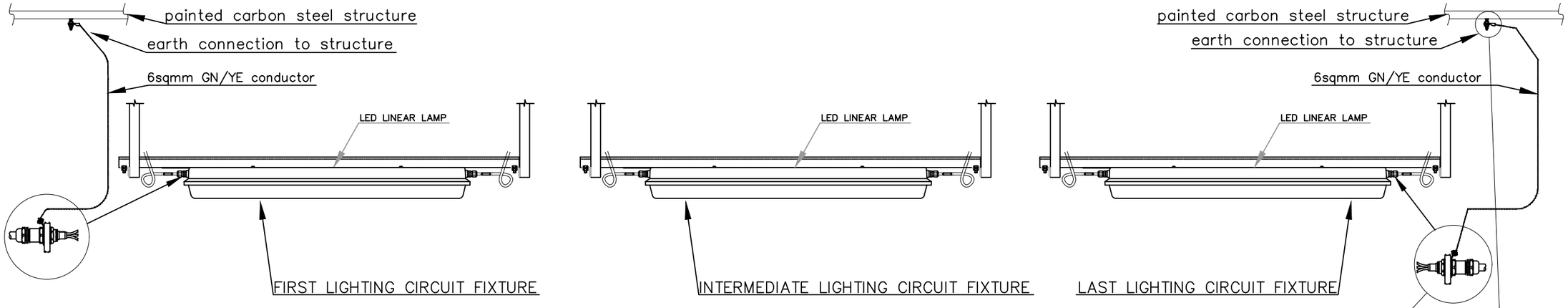
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 006 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

E32

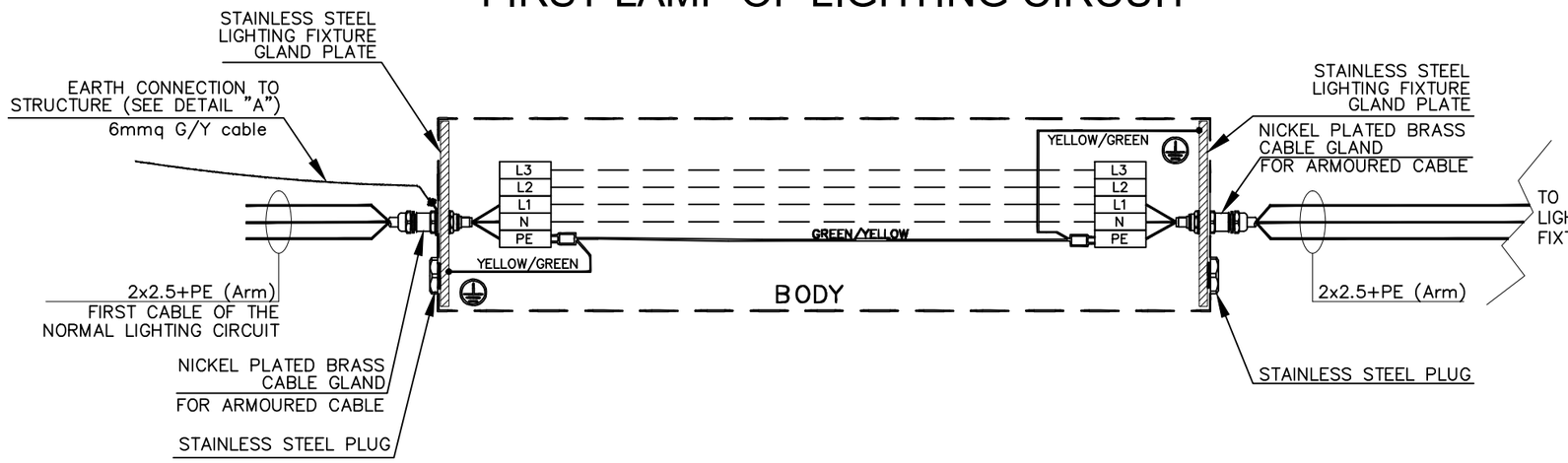


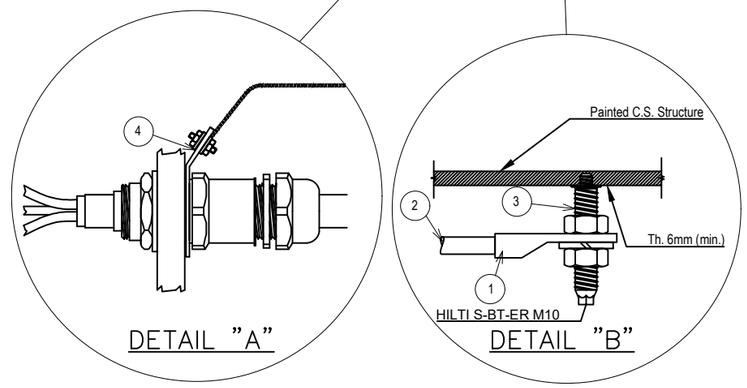
ONLY the first and the last lighting fixture of all circuits are connected to earthing system. The earthing continuity of the intermediate lighting fixtures of the circuits is guaranteed by the using of the first and the last lighting fixture earthing connection which is permanently connected to the earthing system as per the typical below.

Refer also to TYP. "E05" for Lighting Fixtures.

NORMAL LIGHTING CIRCUIT EARTHING CONTINUITY TYPICAL

FIRST LAMP OF LIGHTING CIRCUIT





POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			
2	Y/G INSULATING COPPER CONDUCTOR		6sqmm	ASR	
3	HILTI S-BT-ER M10/15 SN6 C/W NUTS AND GROWER	AISI 316L	M10X28		NOTE 1
4	CABLE GLAND EARTH TAG	NPB	M20		

The same logic is used for the earthing continuity of Emergency Lighting Circuits. The above typical has been done to represent the Earthing Continuity of G/Y conductors, the correct connections of all conductors in the respective Terminal Strips are shown in doc. AR-FEN-10-ROEC-600132 Lighting and Socket Circuit Diagrams.

NOTES:
1) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM FOR SINGLE EQUIPMENTS EARTHING CONNECTION.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING – OUTDOOR LINEAR LIGHTING FIXTURE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 023 | REV. 02

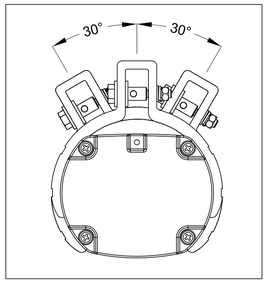
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

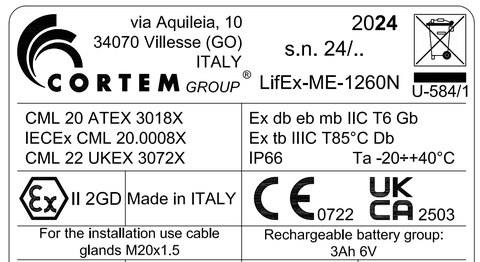
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



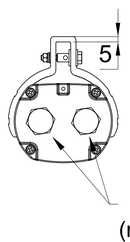
LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

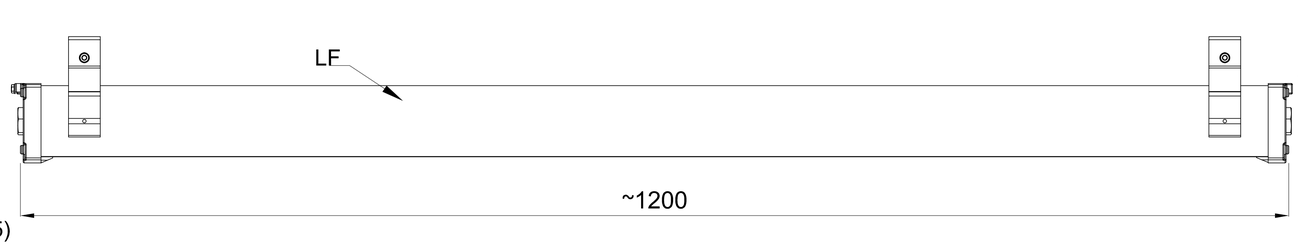
CERTIFICATE NAMEPLATE



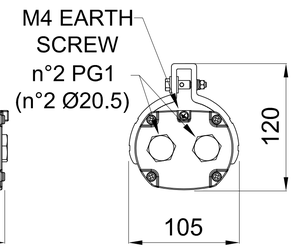
LEFT SIDE (OUT)



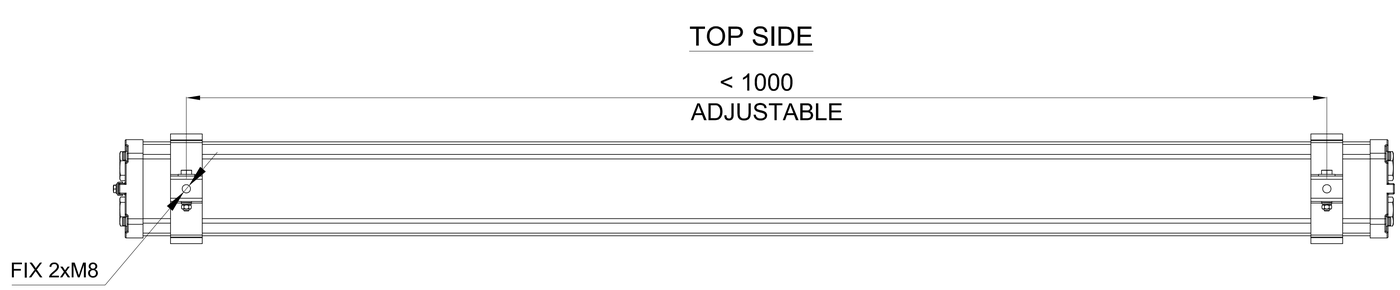
FRONT SIDE



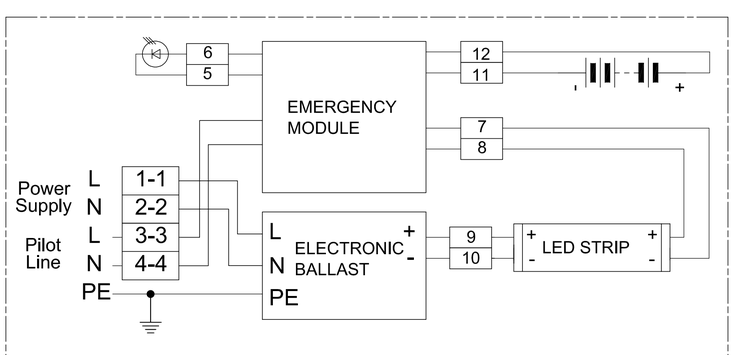
RIGHT SIDE (IN)



TOP SIDE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / NEXT /
TOT. 2

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AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

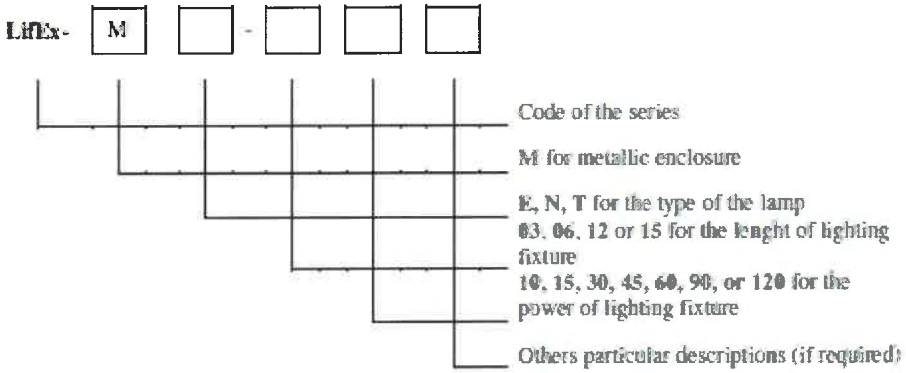
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

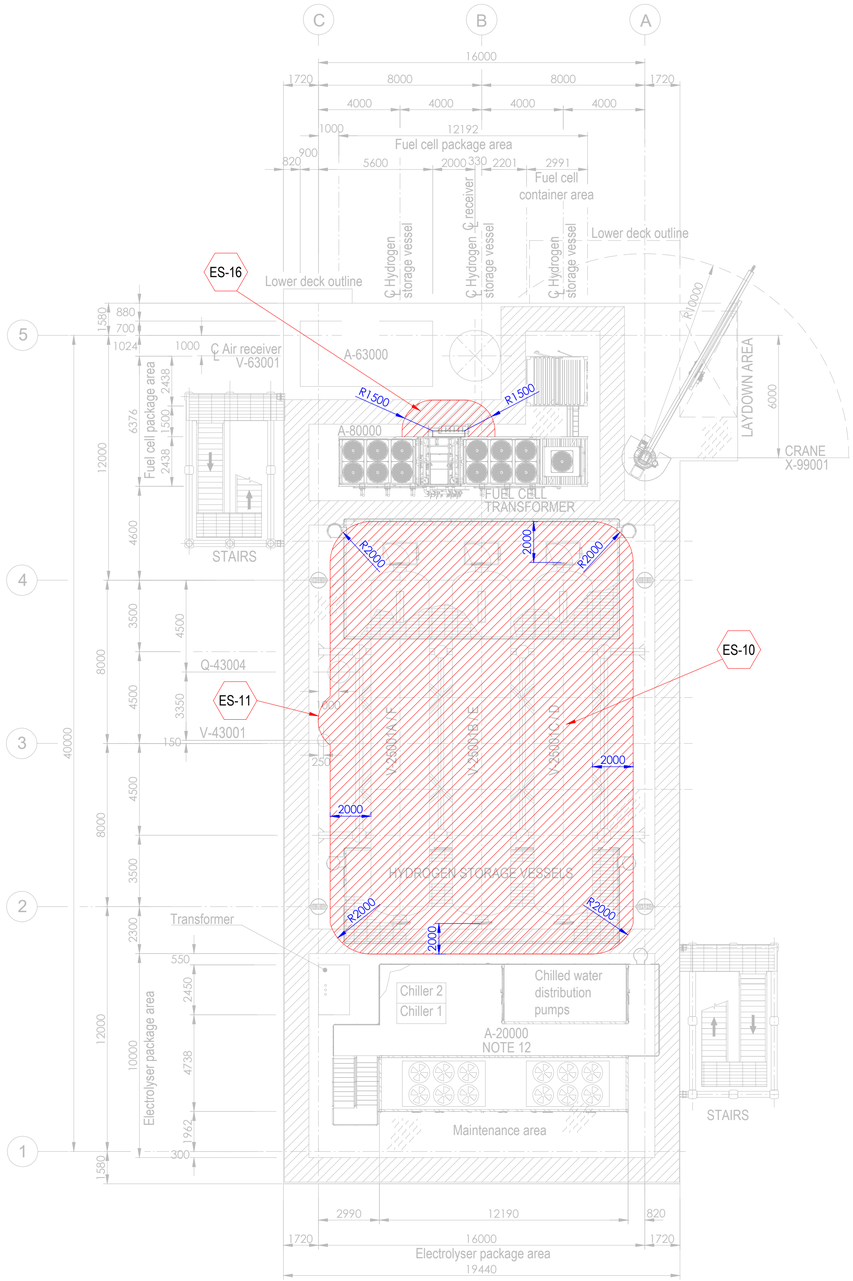
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

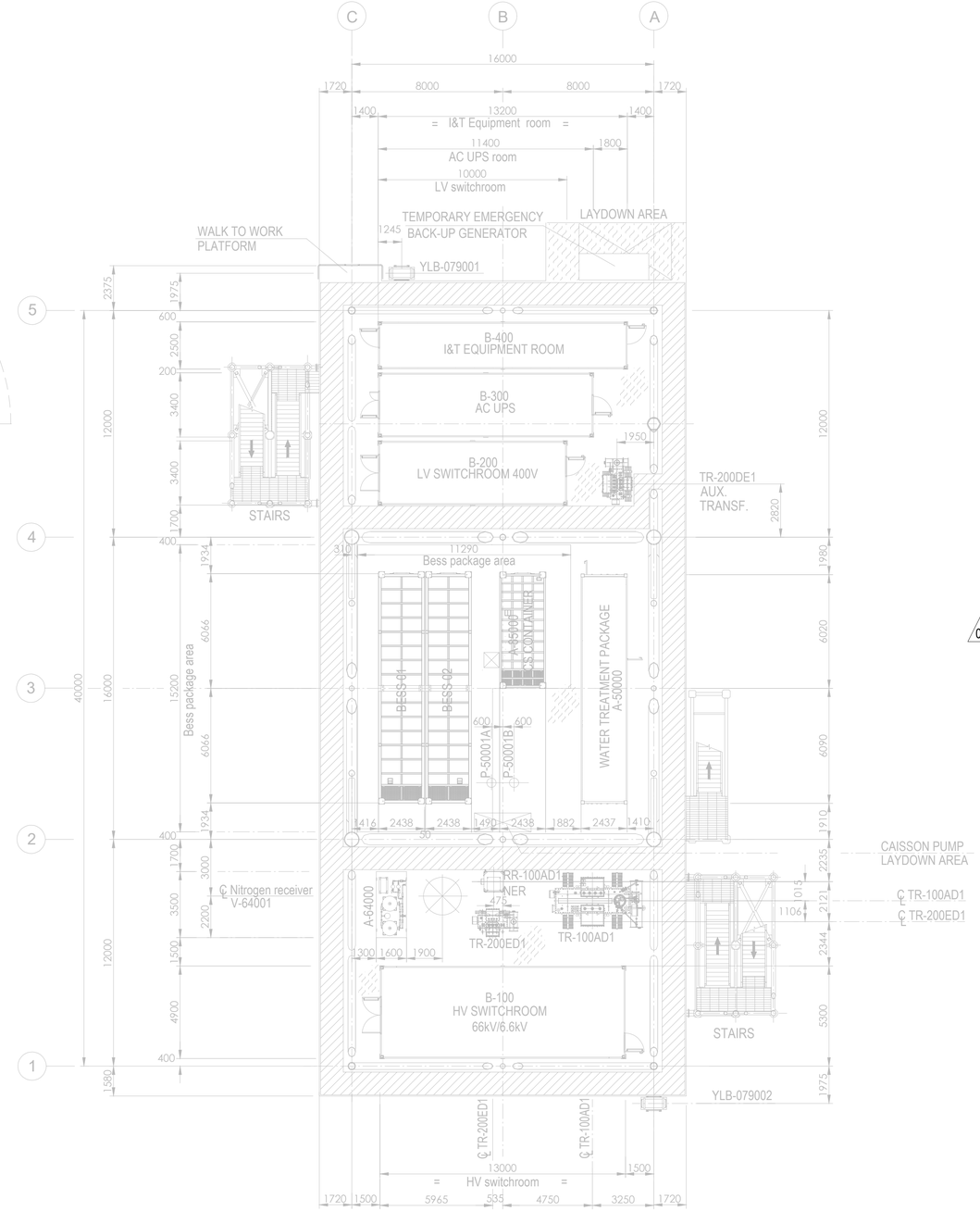
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



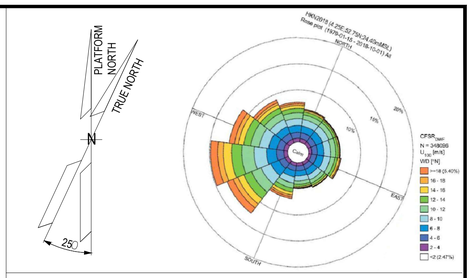
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

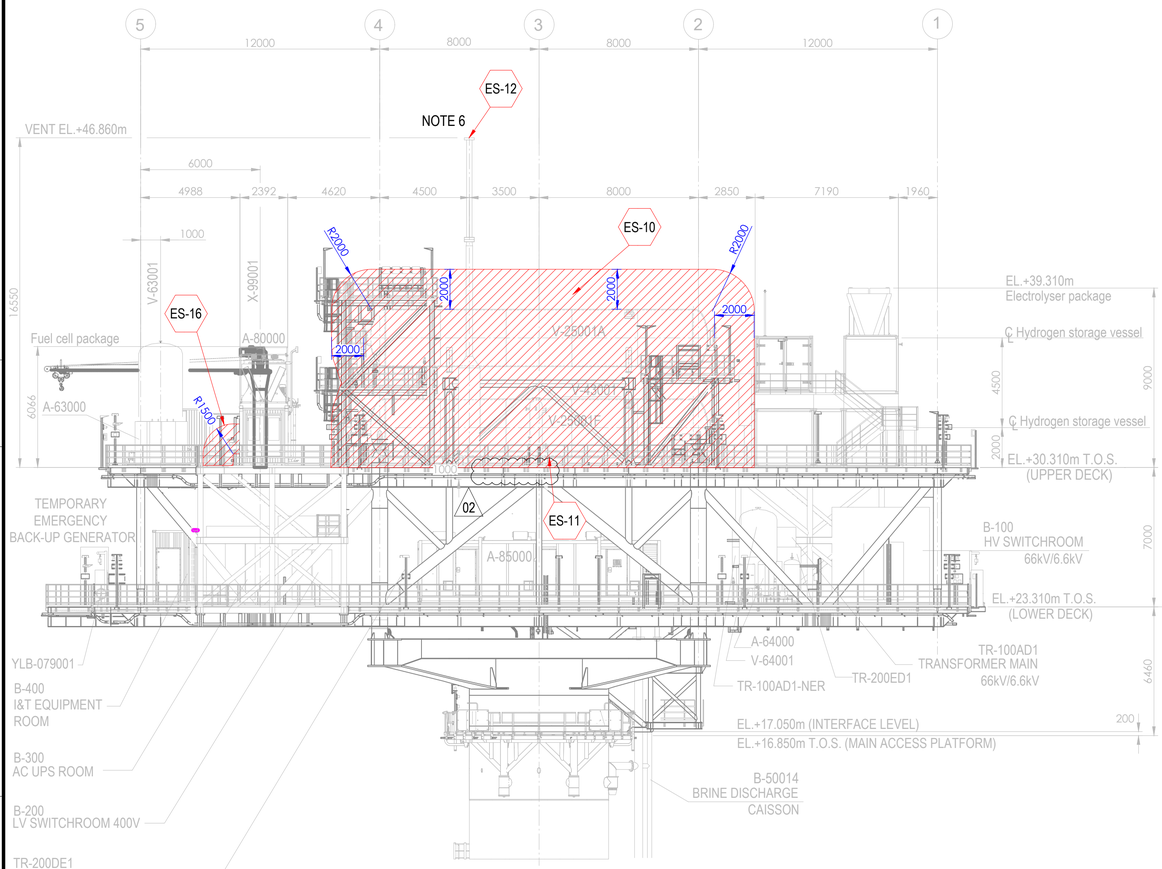
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

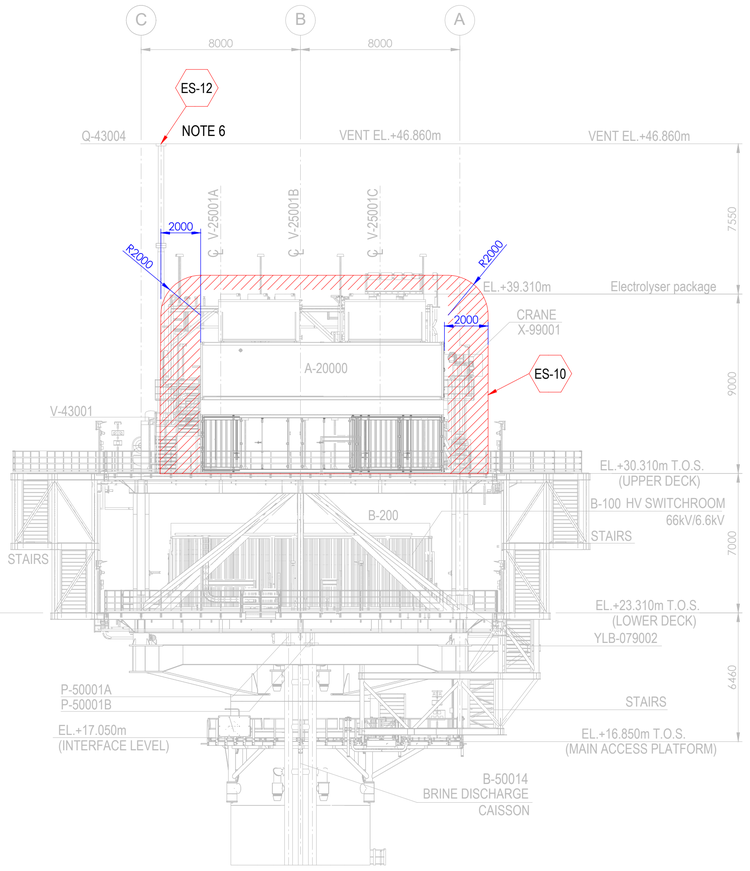
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

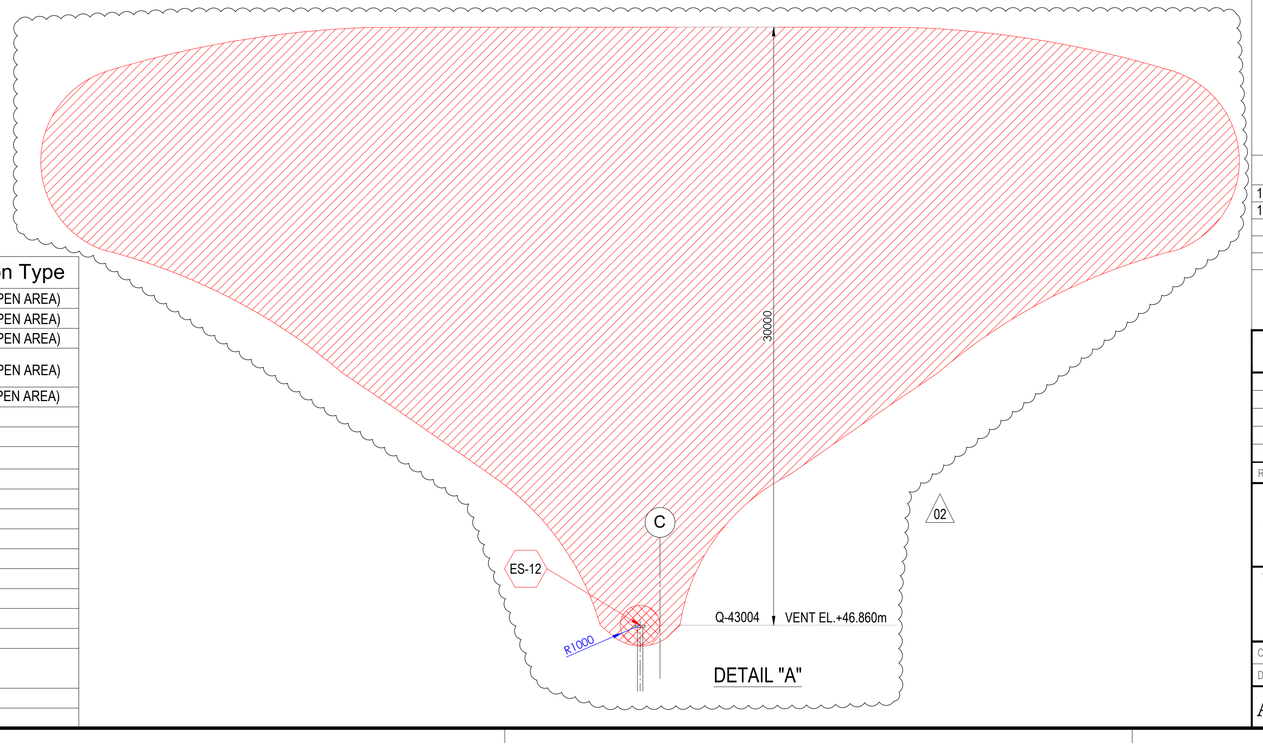


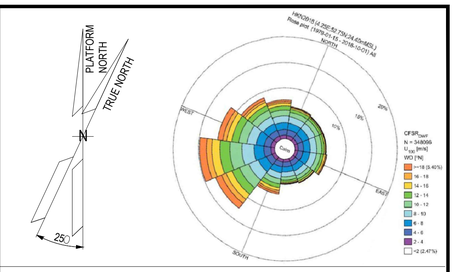
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-05 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001681	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-05	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001681		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-05	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001681		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

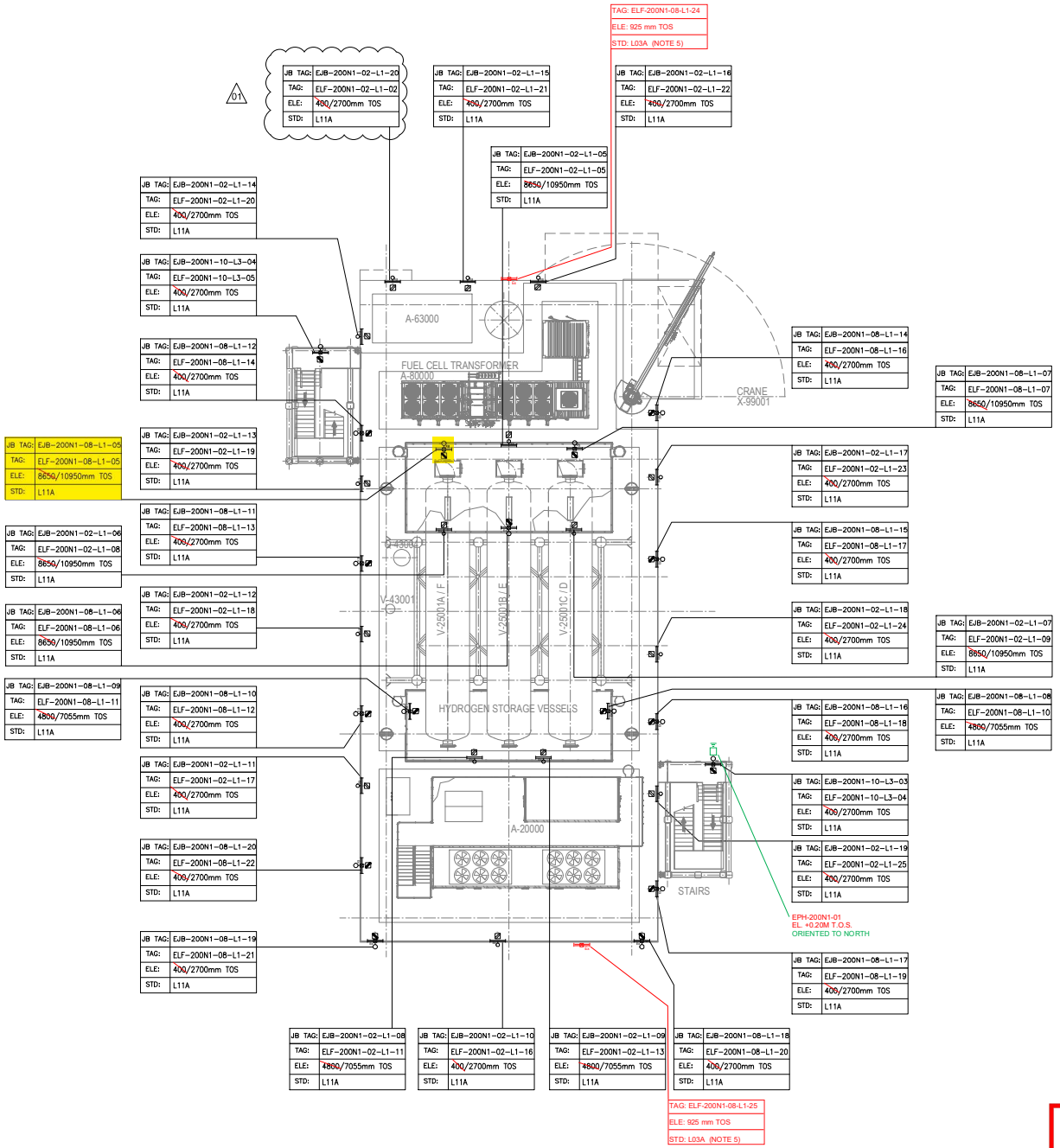
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

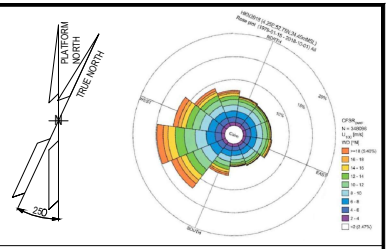
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-13	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:02:50.033Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-16T08:00:02.729Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

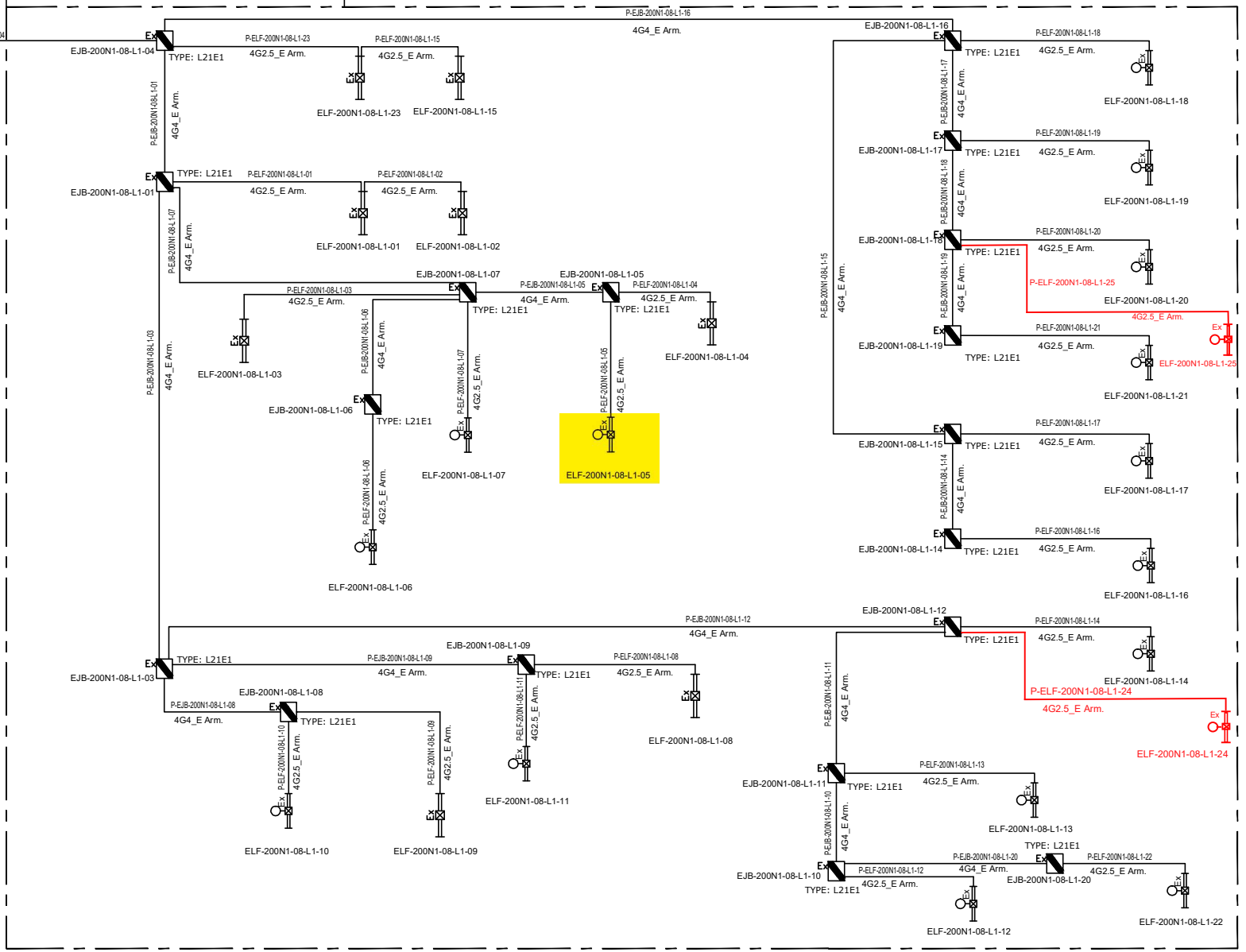
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

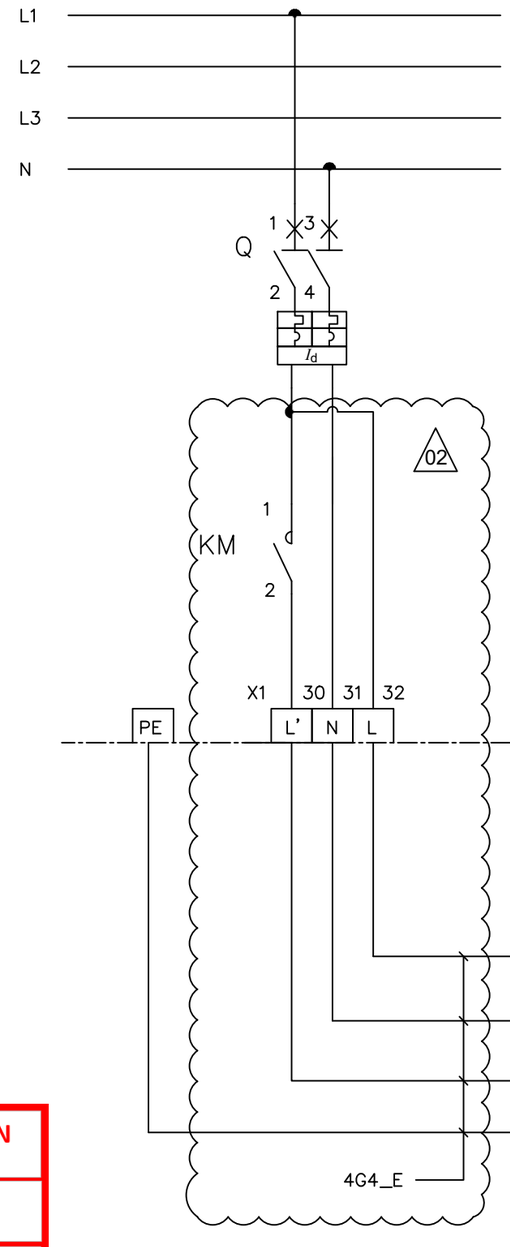
File Name : 123A90–DDL–EL–DG–20125

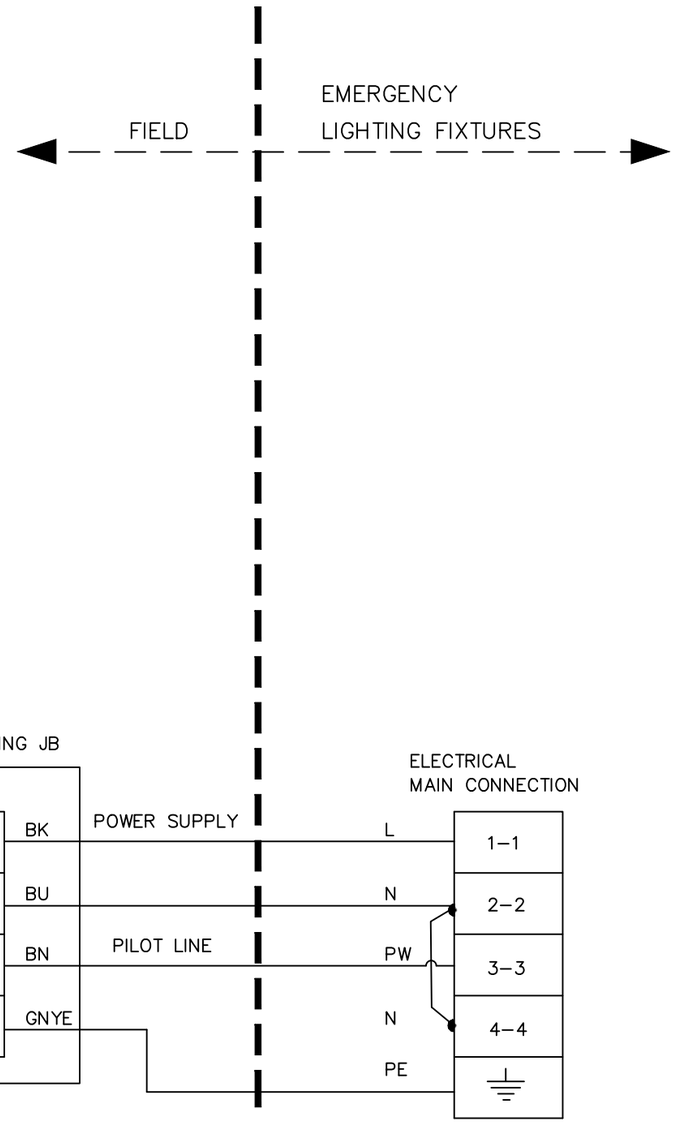
CROSSWIND

ROSETTI MARINO

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz





L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

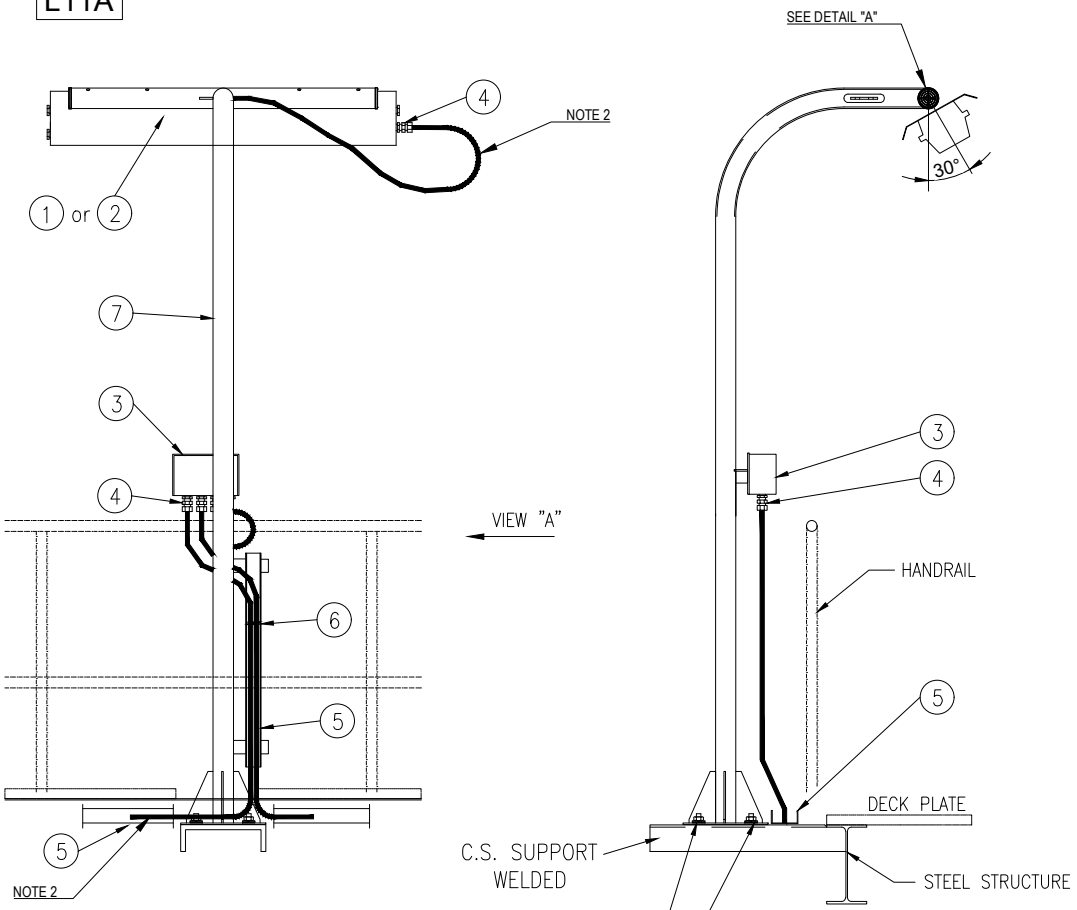
CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

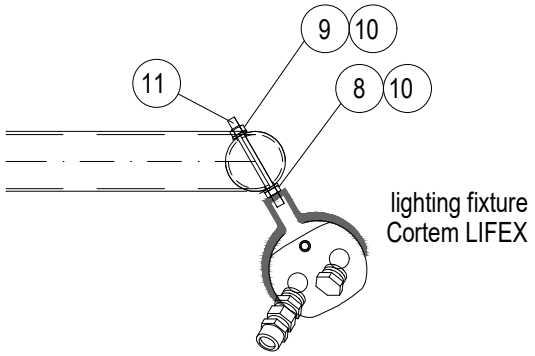
File Name : 123A90–DDL–EL–DG–20125

L11A



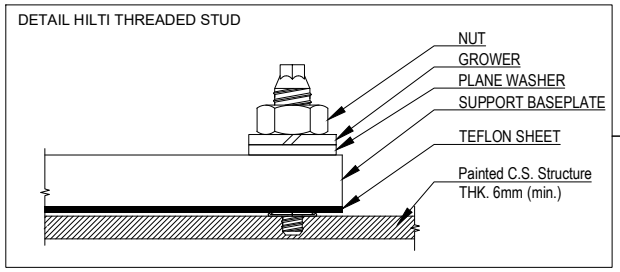
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

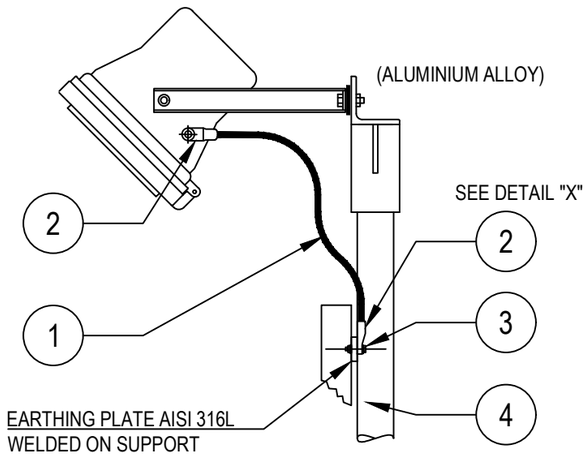
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

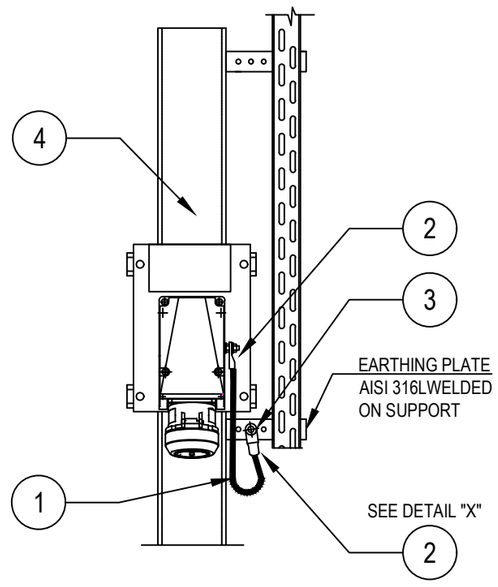
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

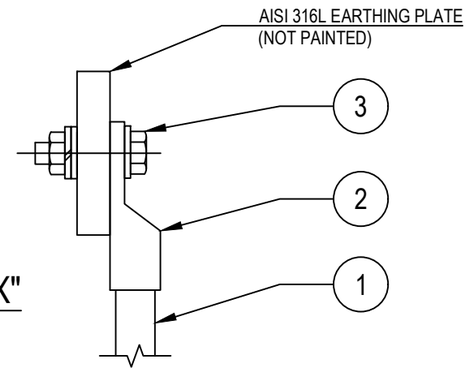
LIGHTING FIXTURE/GENERAL ITEM ON POLE



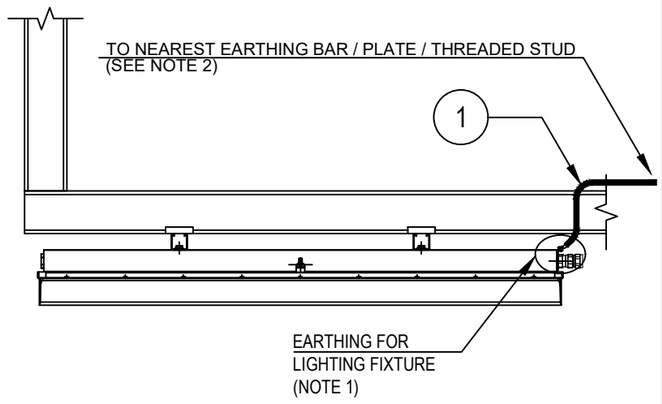
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

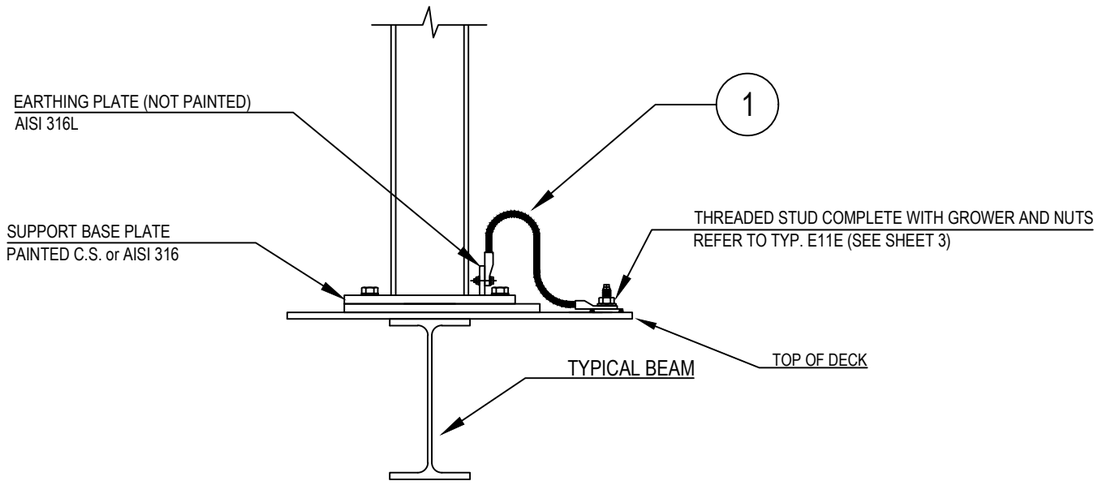
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

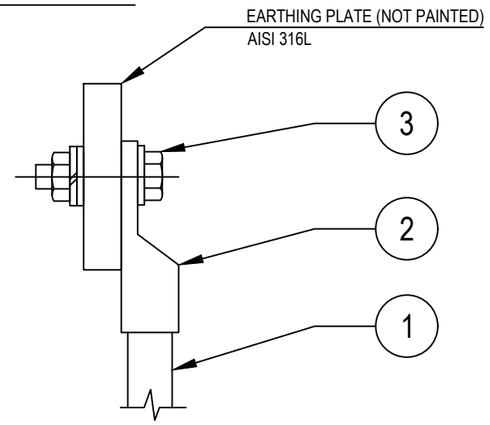
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

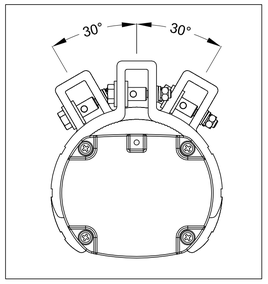
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 1
- Q.TY: 57
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

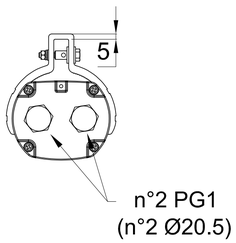
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



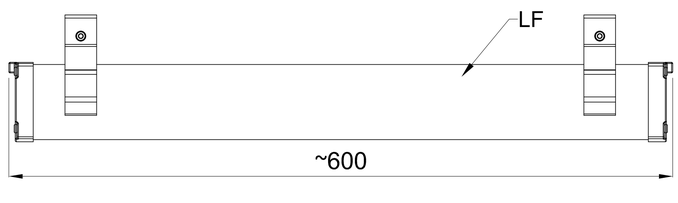
LF INFORMATION	
NOMINAL POWER	45W
CONSUMED POWER	43,5W
POWER FACTOR	>0,93
RATED CURRENT	200 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6200 lm
LIGHT INTENSITY	2248 cd
EFFICIENCY	143 lm/W
WEIGHT	2,5 Kg
IP PROTECTION	IP66

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-0645-BB	110-277Vac 50-60Hz 45W LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

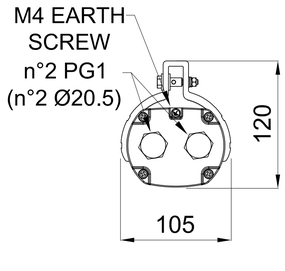
LEFT SIDE (OUT)



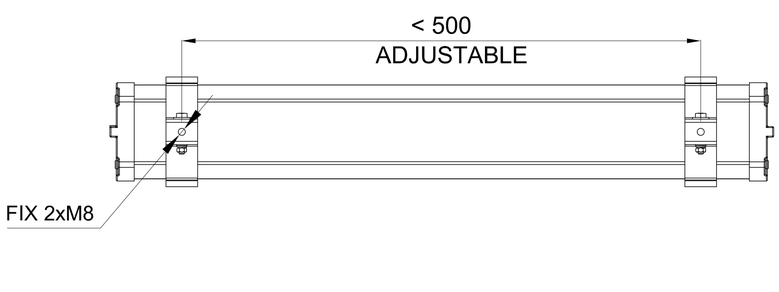
FRONT SIDE



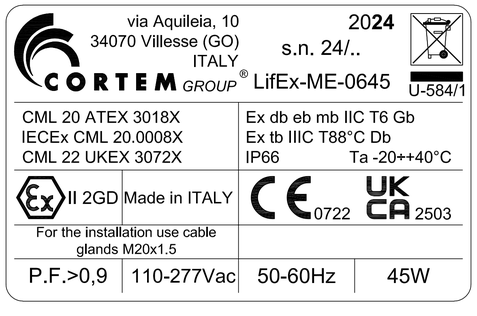
RIGHT SIDE (IN)



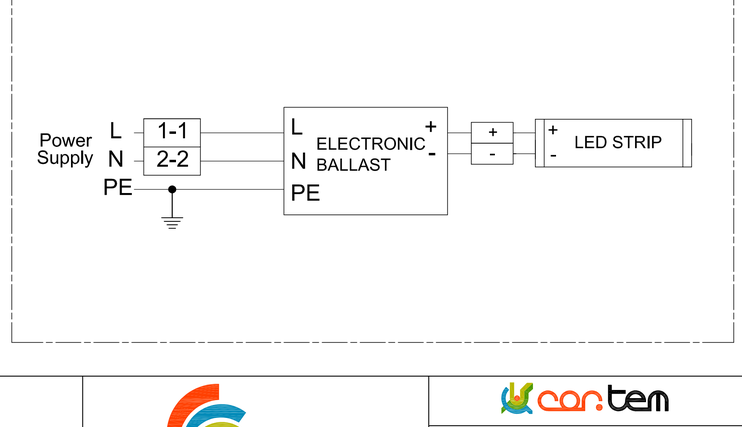
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
001 LIFEX-ME-0645-BB/C2402693/10.

CORTEM JOB: COV2402693

DRAWING SCALE: /

DRAWING NUMBER: A3-C 27521

SHEET 1 / TOT. 2

NEXT 2

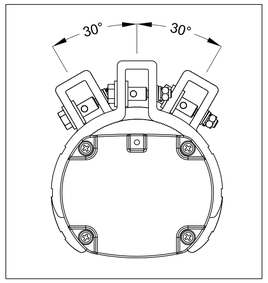
THIS DRAWING IS PROPERTY OF CORTEM SPA
AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

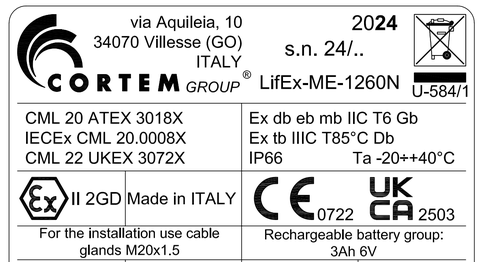
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



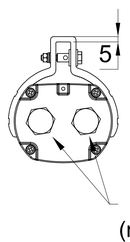
LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

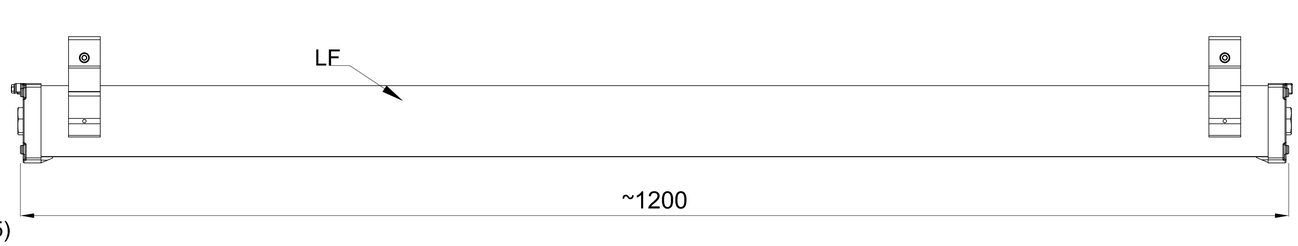
CERTIFICATE NAMEPLATE



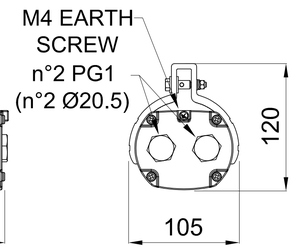
LEFT SIDE (OUT)



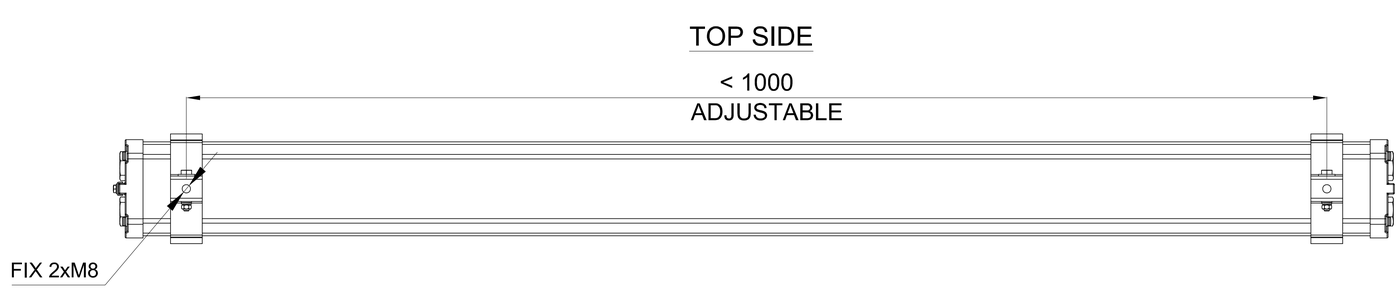
FRONT SIDE



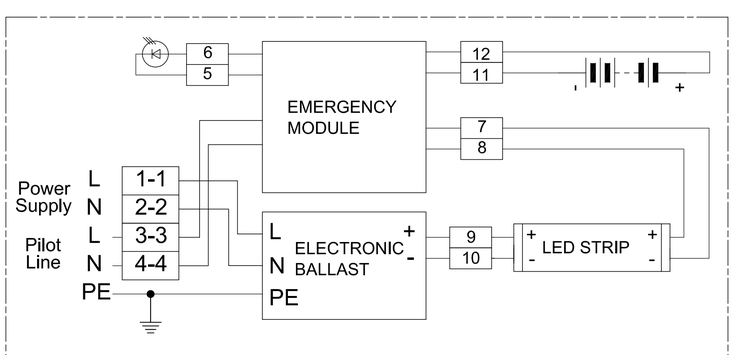
RIGHT SIDE (IN)



TOP SIDE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / NEXT /
TOT. 2

CORTEM GROUP
cortem
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AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

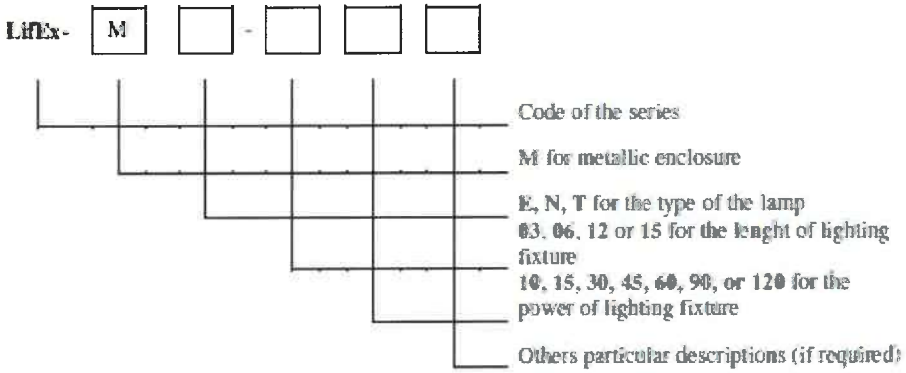
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

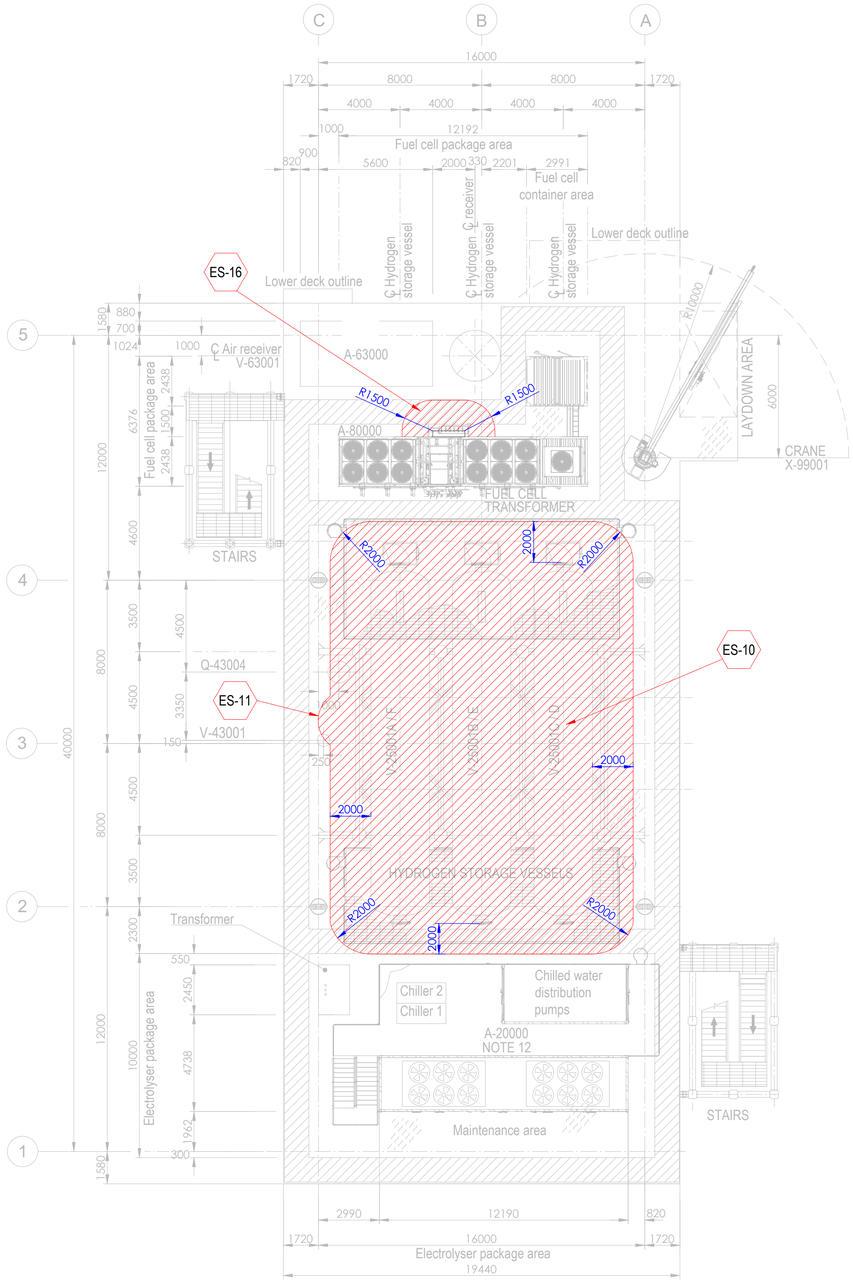
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

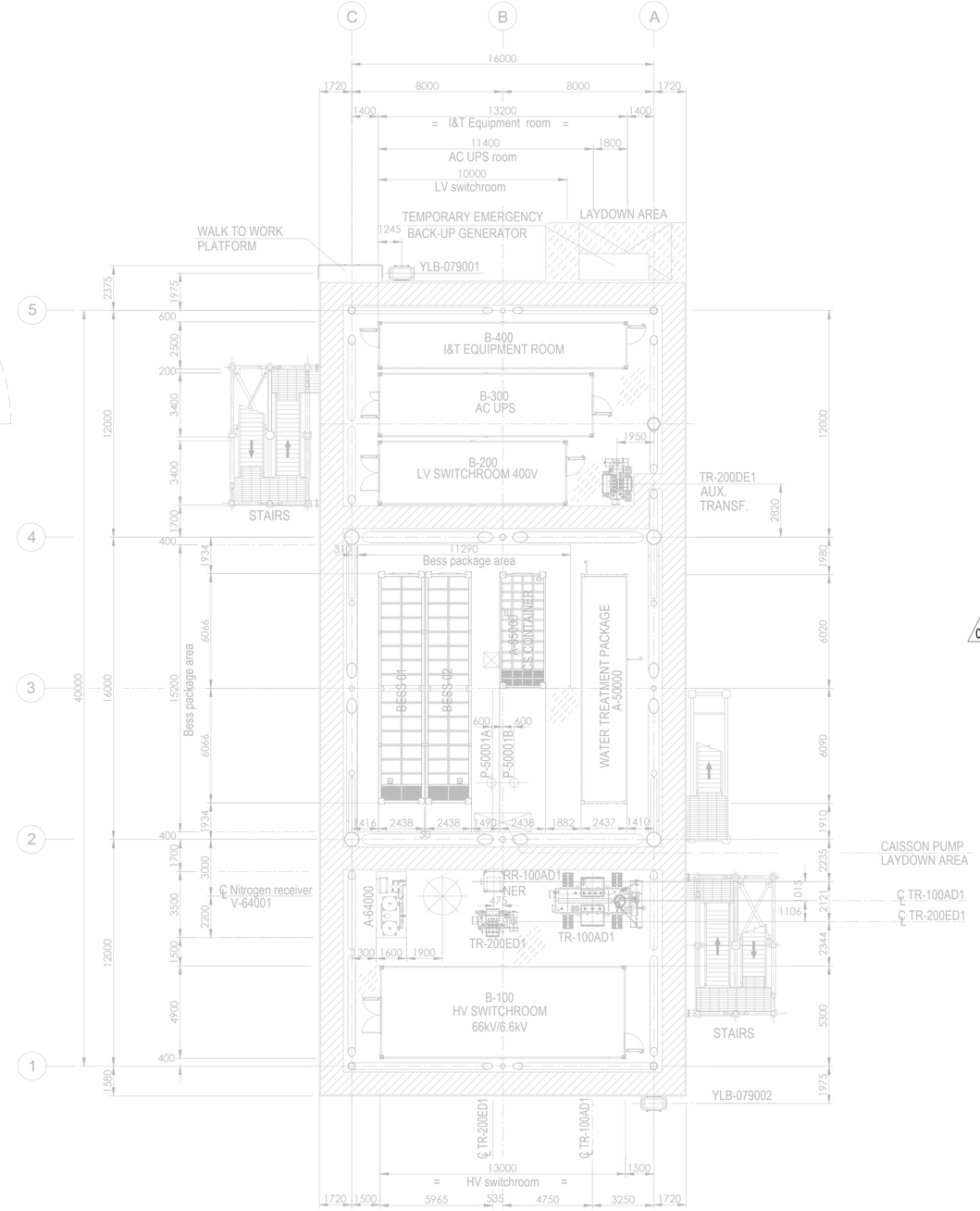
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



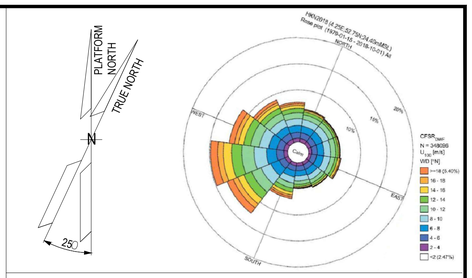
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

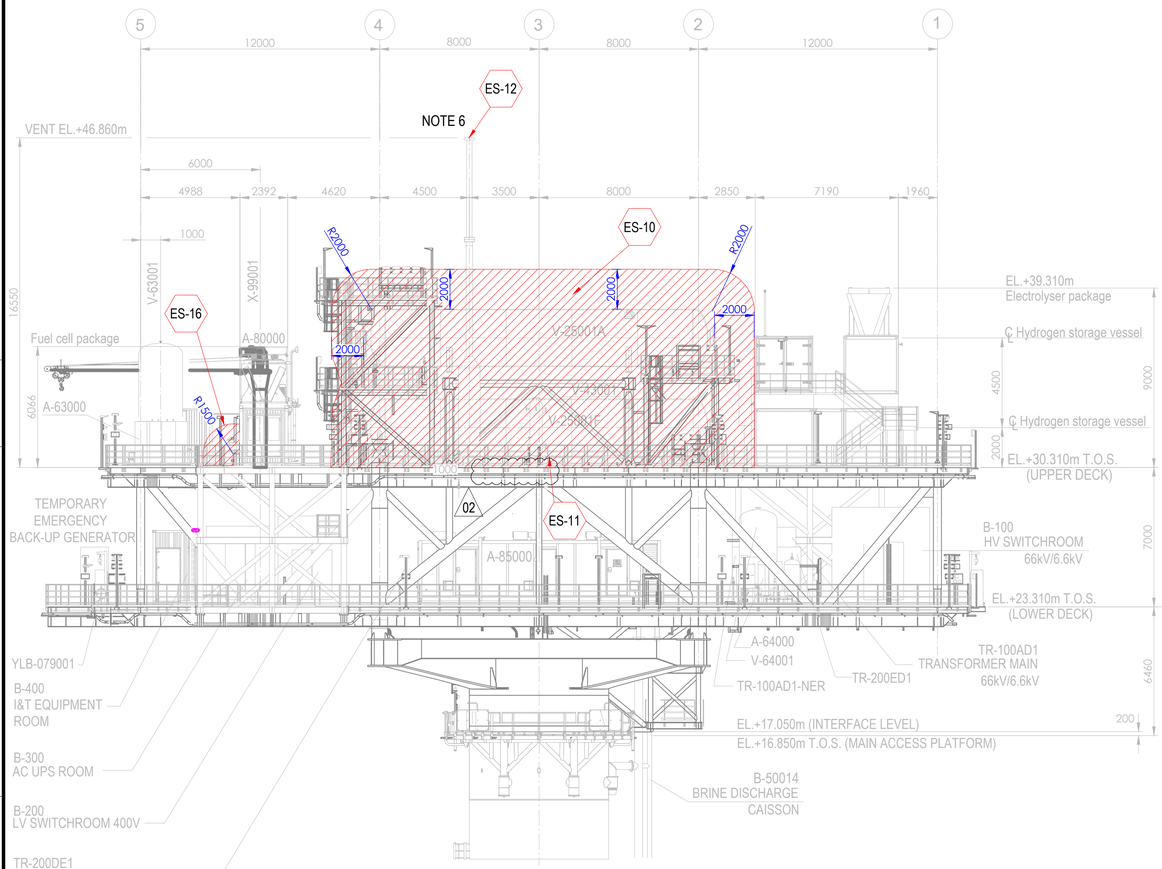
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DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

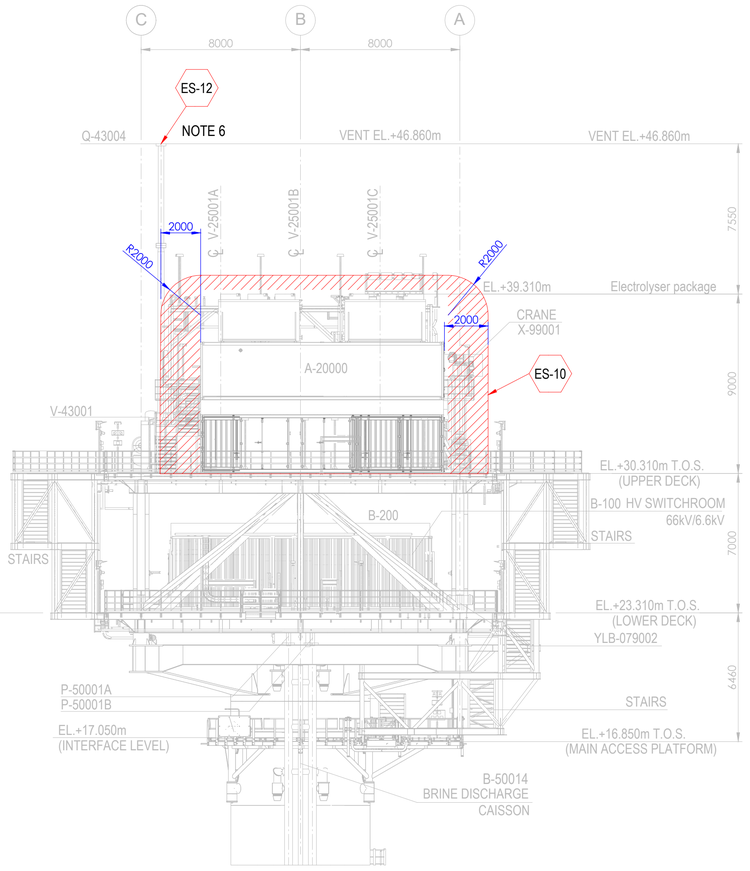
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

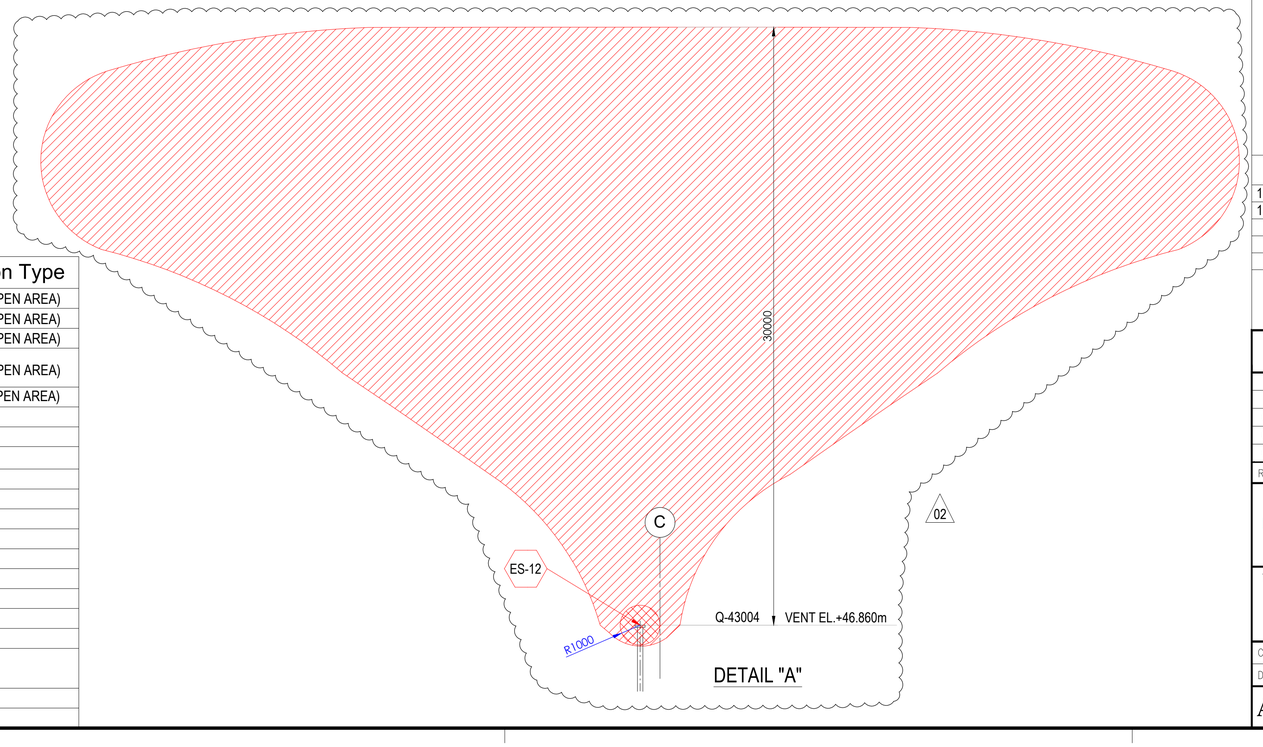


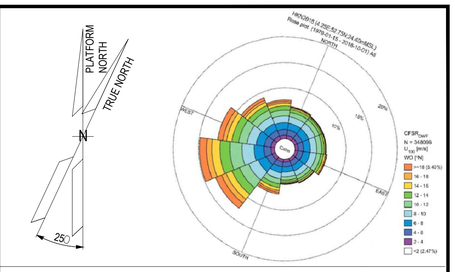
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-06	: EMERGENCY LIGHT	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001682	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK	Discipline: ATEX	Form: CJX01 — Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-06	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001682		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	PL	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-06	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001682		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

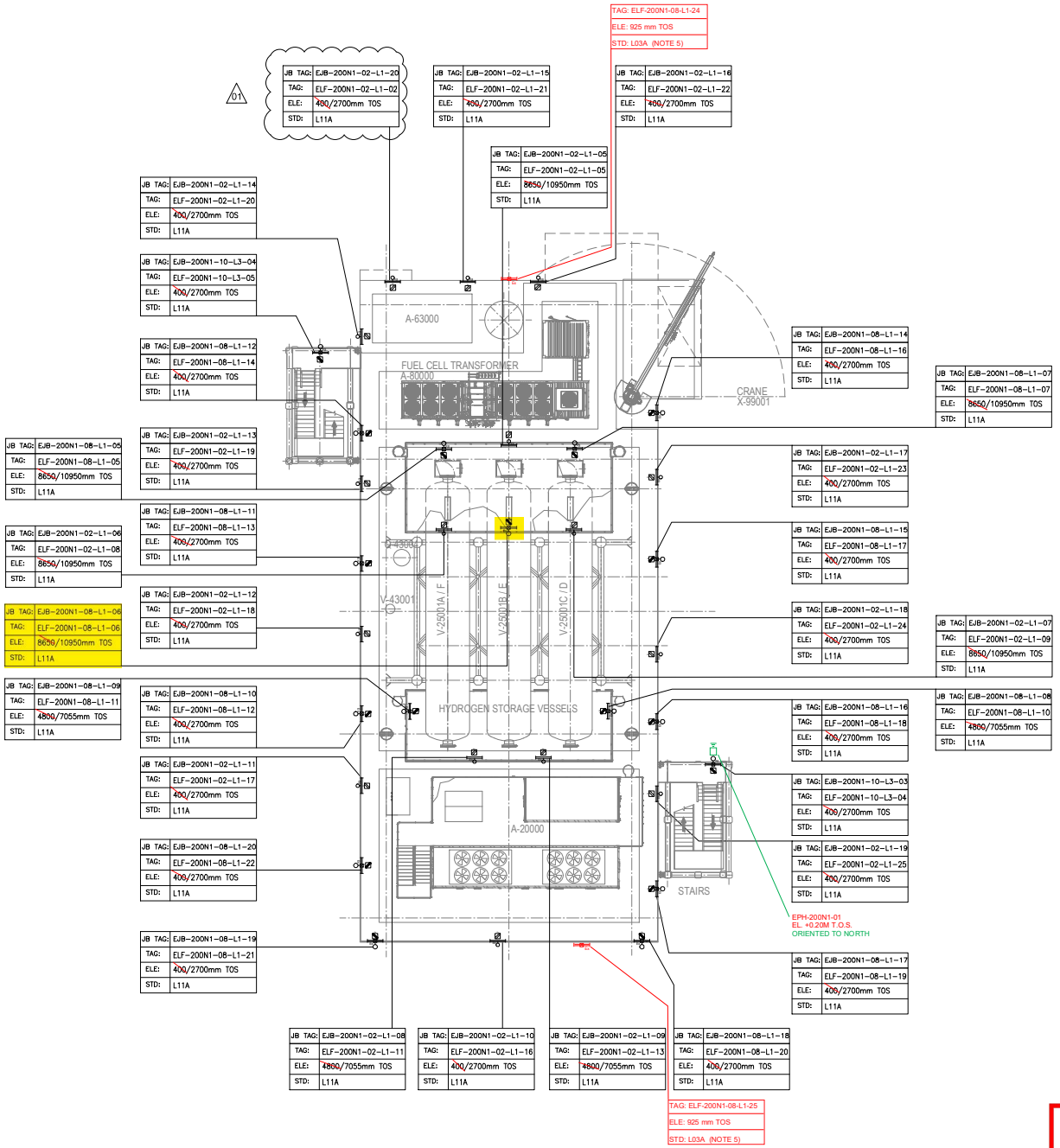
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Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

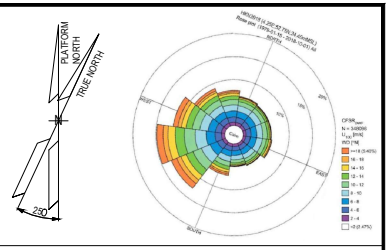
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-13	2025-01-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:03:09.163Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-15T16:57:55.374Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

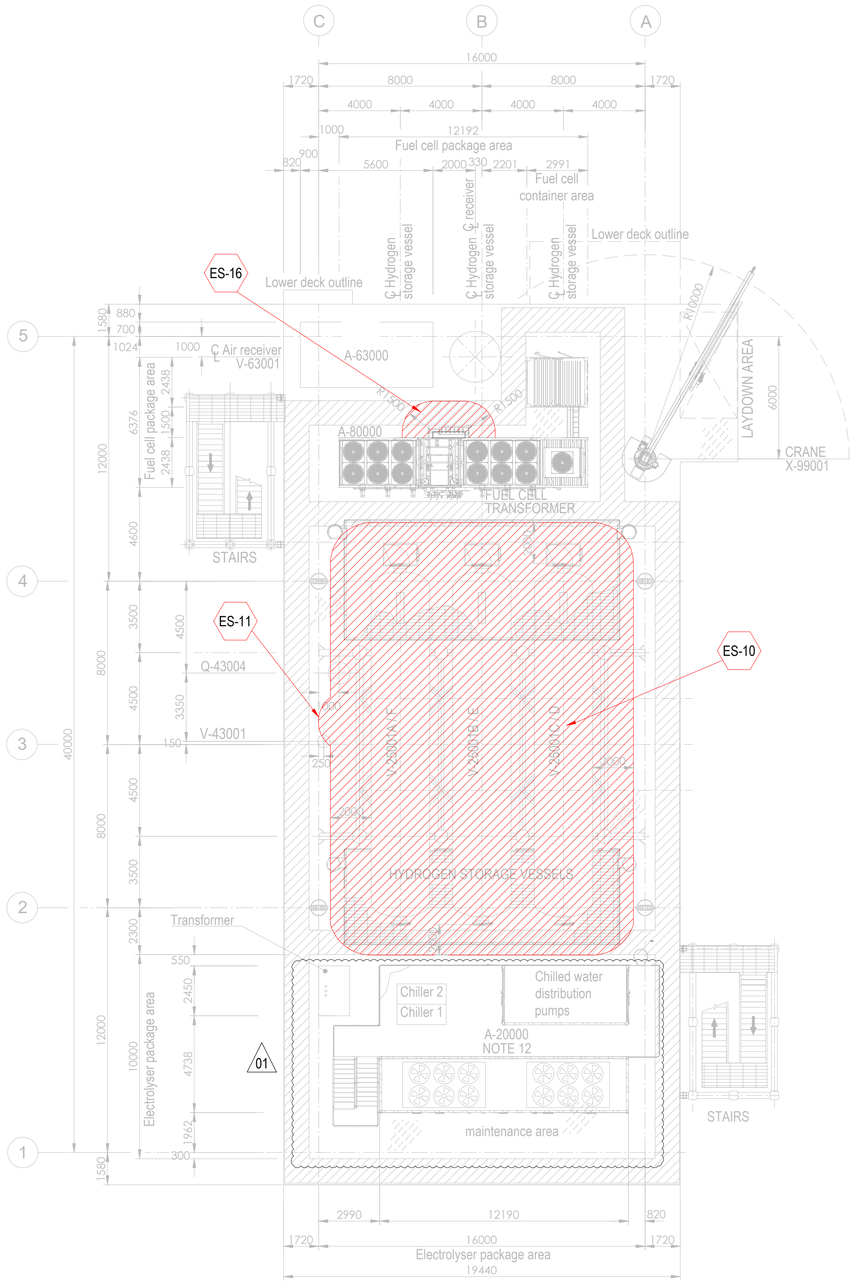
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

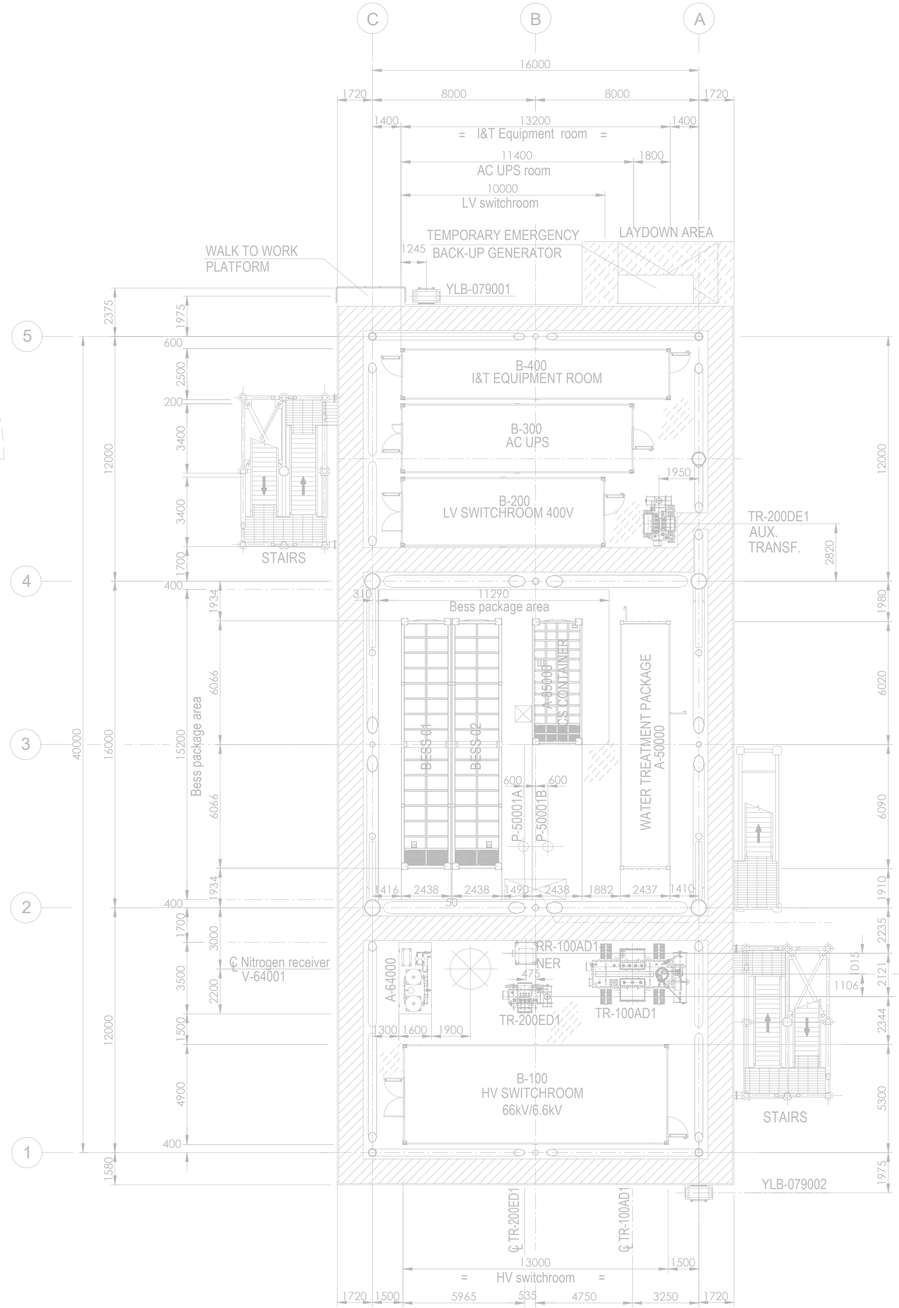
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 01



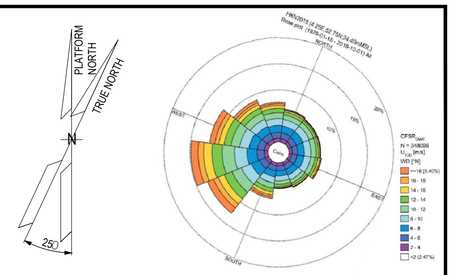
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

01

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

01

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

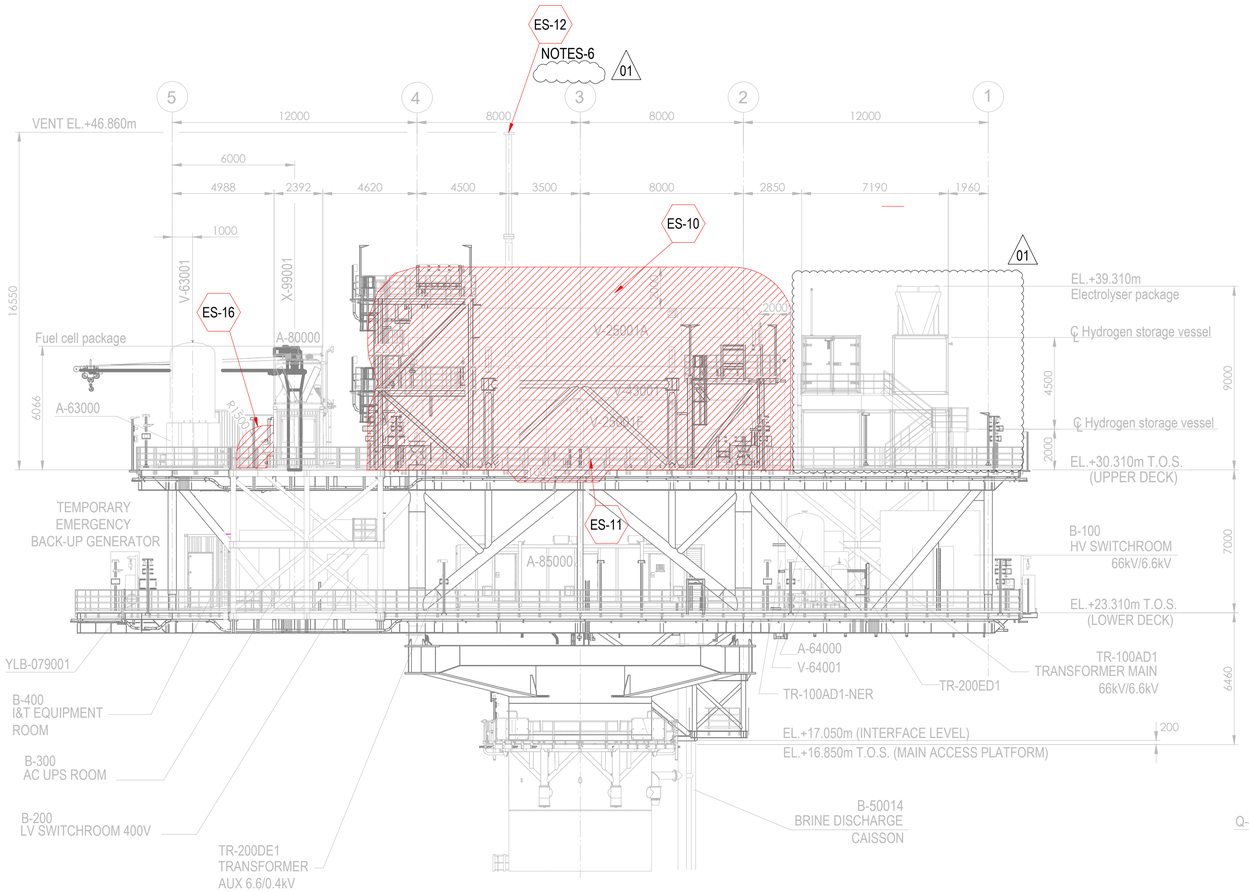
TITLE : BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30022	SHEET 001	REV. 01

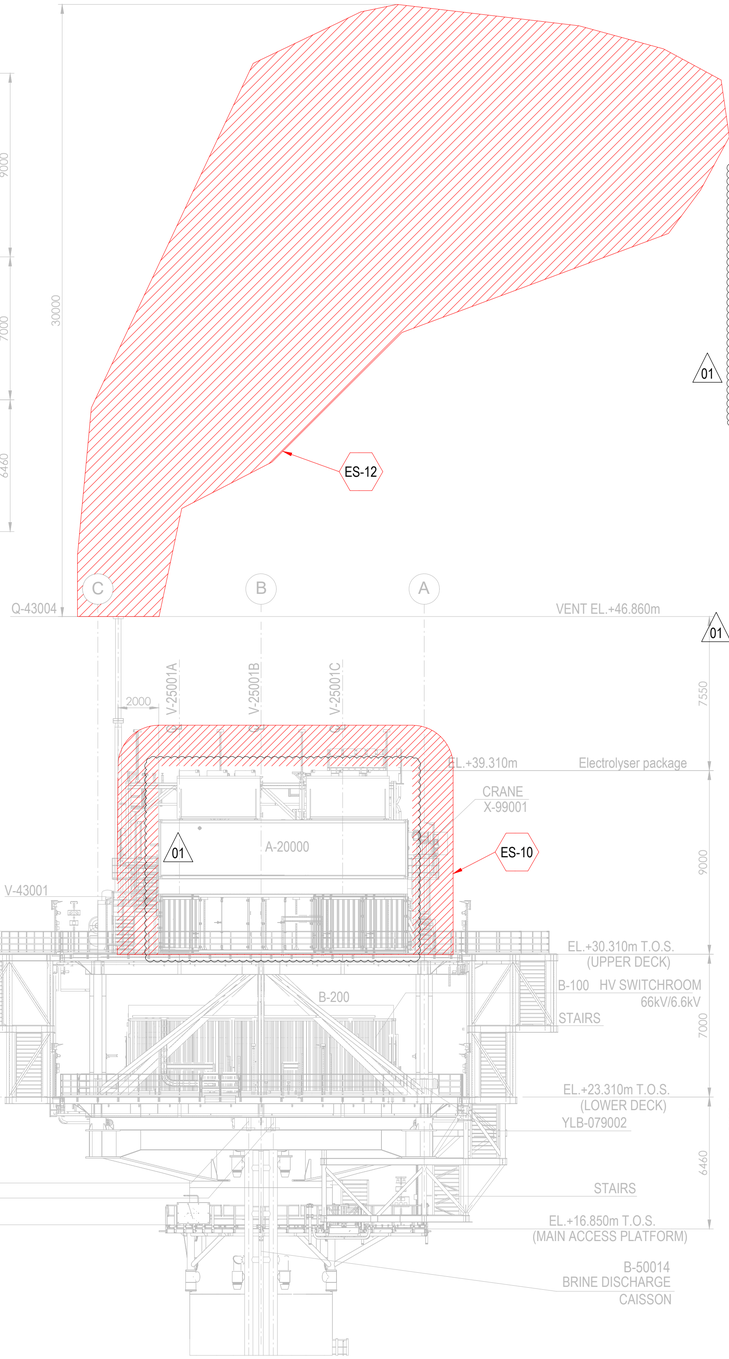
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 01



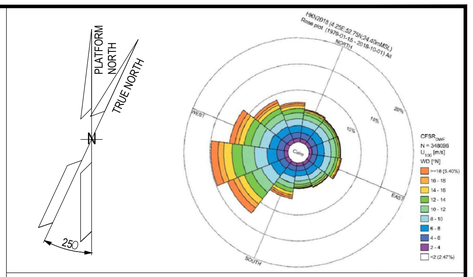
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

01

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. (ES12) IS SHOWN ONLY ON ELEVATION LOOKING NORTH ON THIS LAYOUT
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

01

LEGEND

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

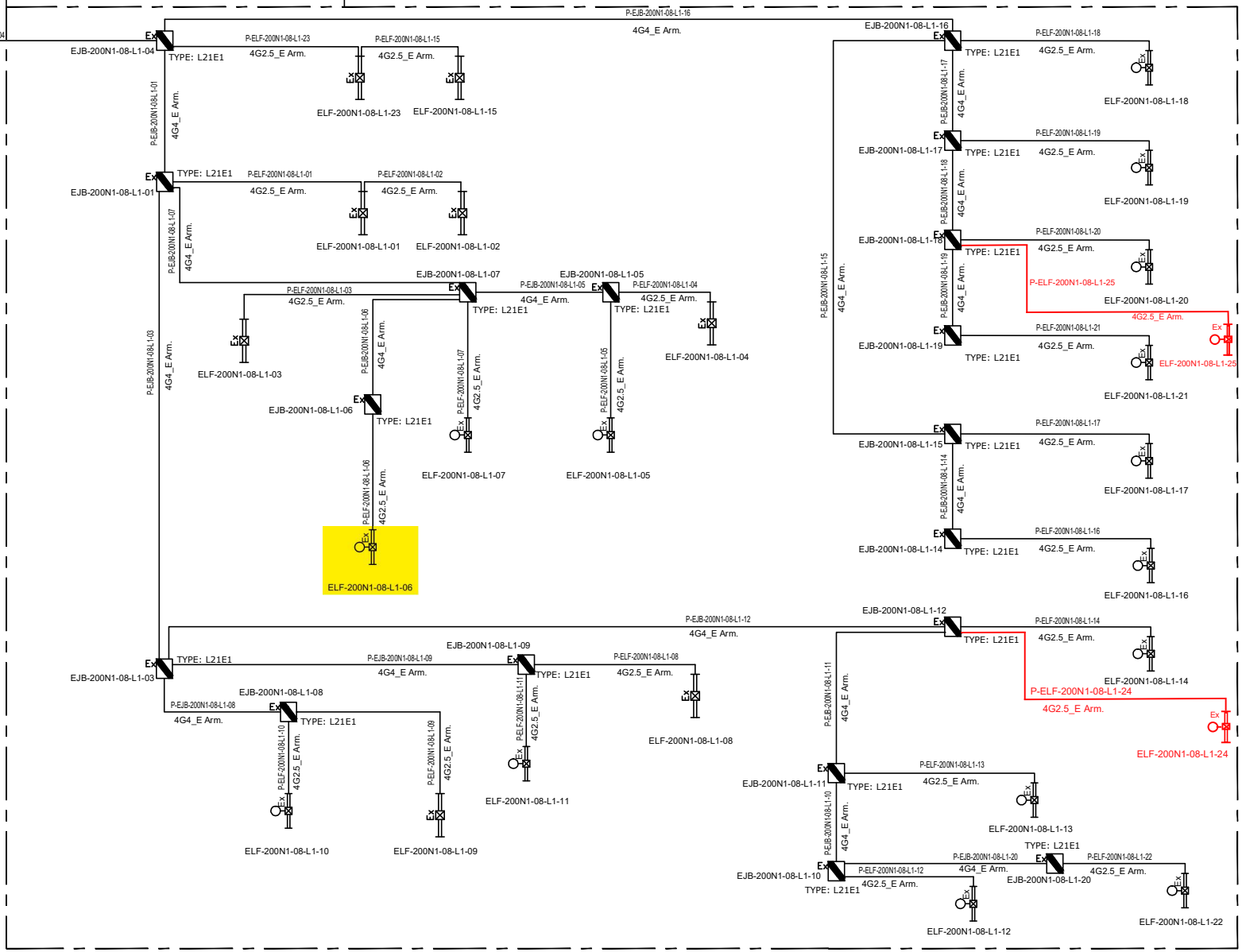
A1	DRAWING NO. 123A90-DDL-SAF-DL-30024	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30024 Rev.01

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DG–20125	011	01

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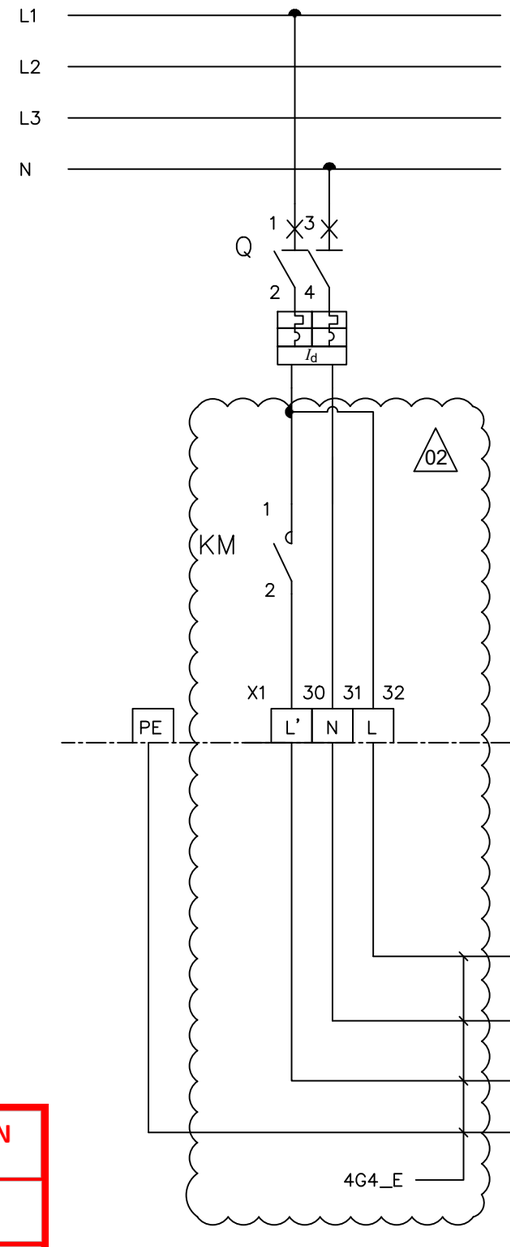
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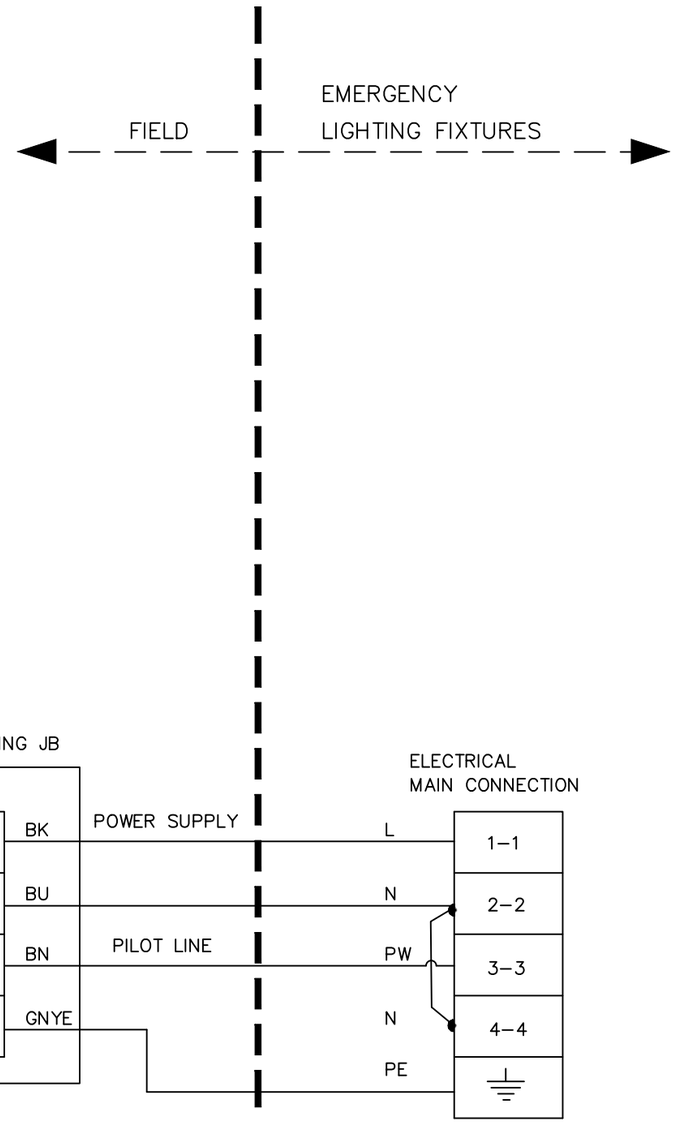
CROSSWIND

ROSETTI MARINO

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz





L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

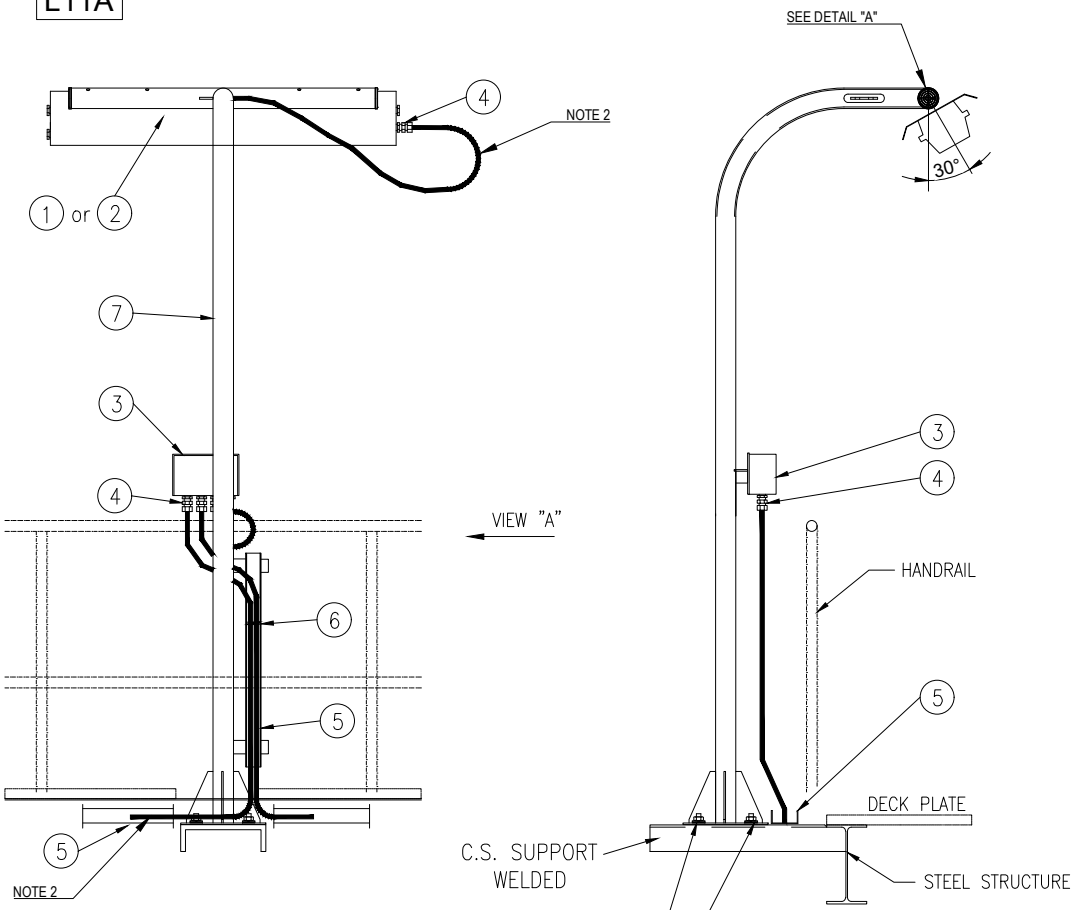
CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

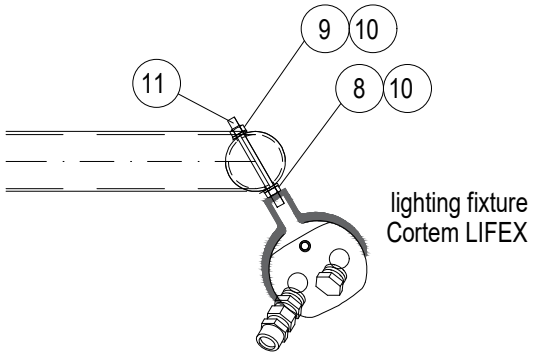
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L11A



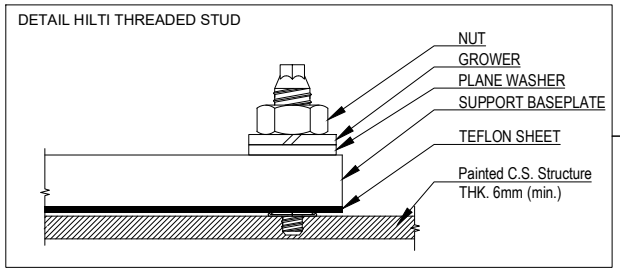
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

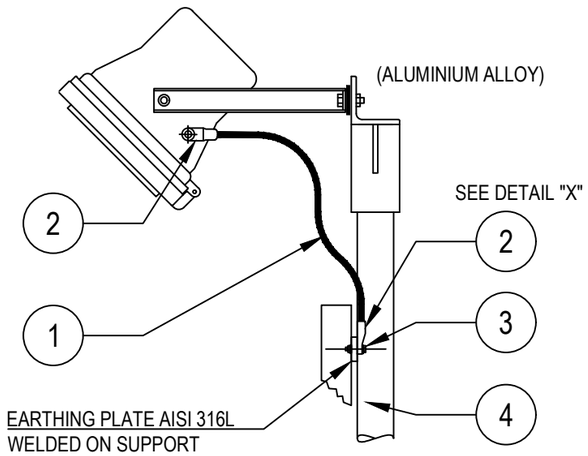
F.to UNI A3: 420mmx297mm

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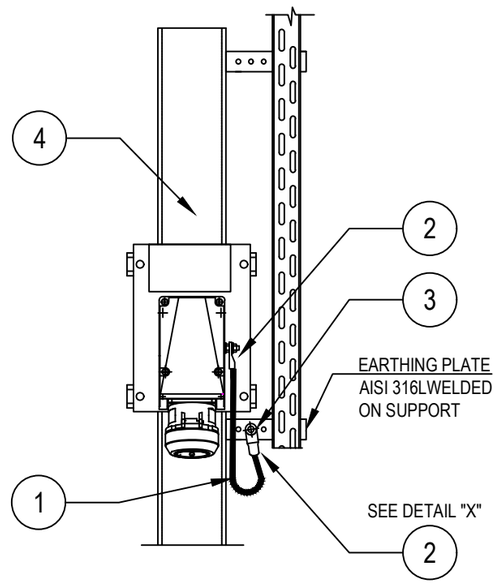
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

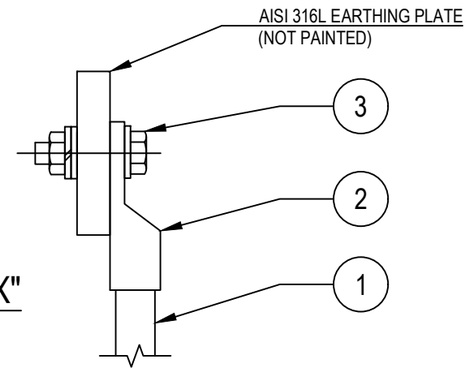
LIGHTING FIXTURE/GENERAL ITEM ON POLE



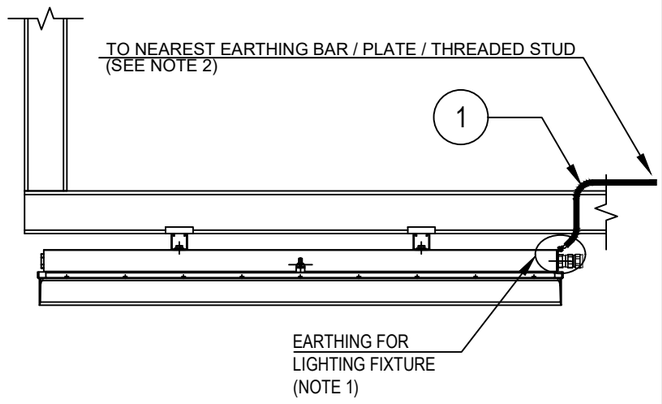
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

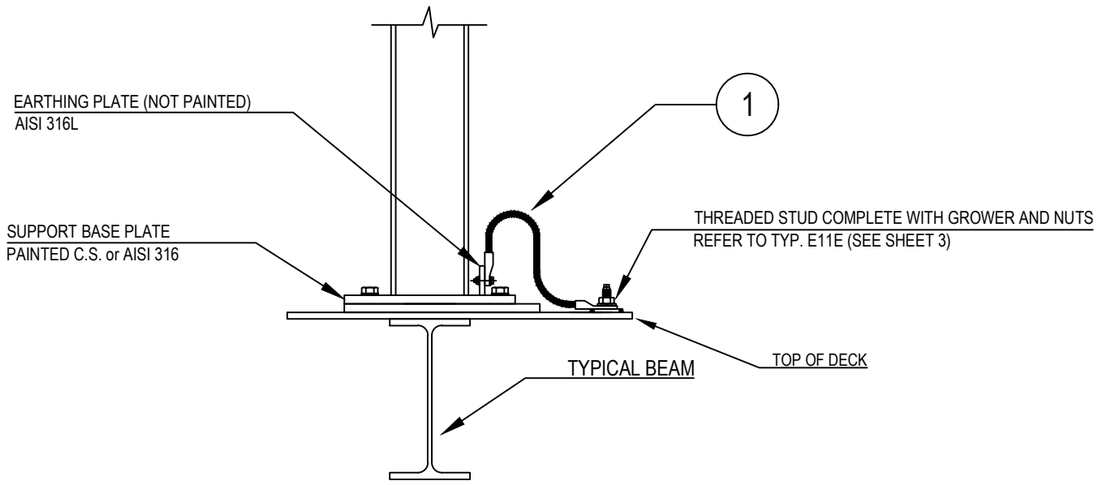
F.to UNI A3: 420mmx297mm

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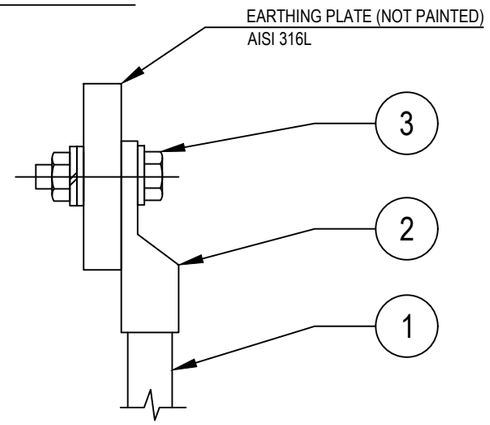
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

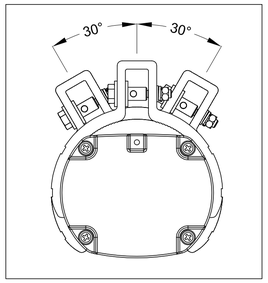
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

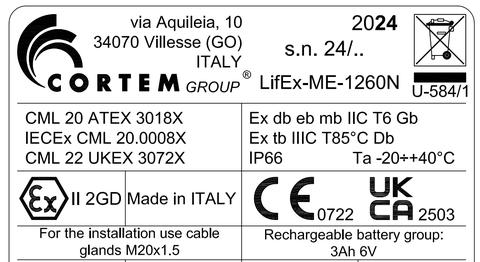
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



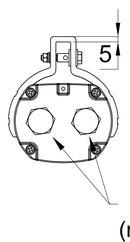
LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

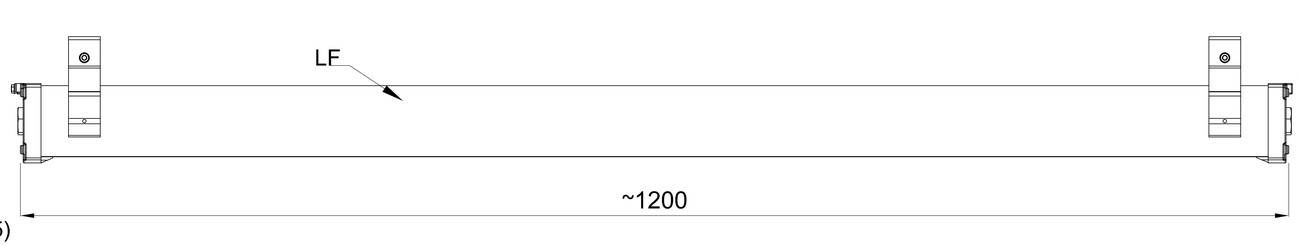
CERTIFICATE NAMEPLATE



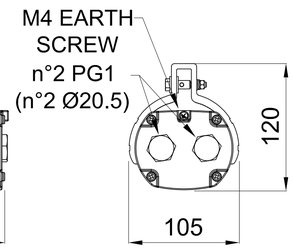
LEFT SIDE (OUT)



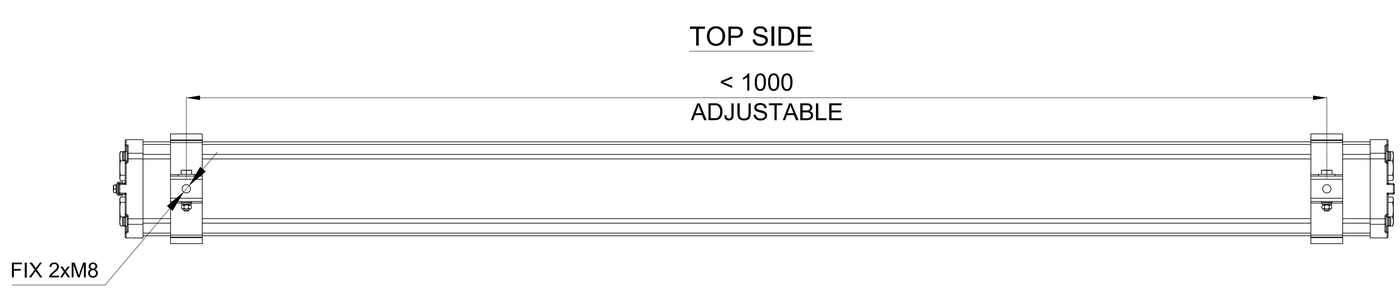
FRONT SIDE



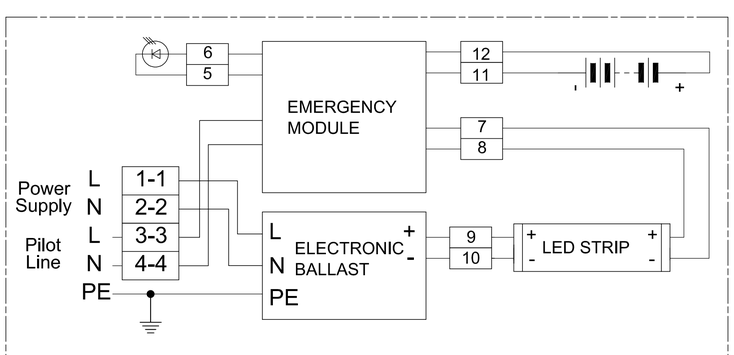
RIGHT SIDE (IN)



TOP SIDE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / NEXT /
TOT. 2

CORTEM GROUP
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AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

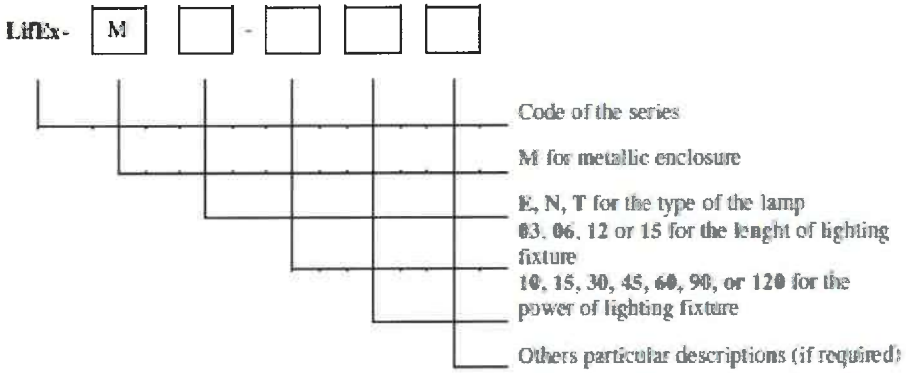
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

ITEM	Tag	ELF-200N1-08-L1-07 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001683	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-07	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001683		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-07	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001683		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

	Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA		
68	Hermetically sealed and enclosed break devices are undamaged	x	NA		
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA		
70	Test port, if fitted, is functional (type “nR” only)	x	NA		
71	Breathing operation is satisfactory (type “nR” only)	x	NA		
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA		
73	The ventilation airflow is not impeded	x	NA		
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA		
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA		
76	Variable voltage/frequency installation complies with documentation	x	NA		
	Extra Ex p checks				
77	Pressurization gas is correct type	x	NA		
78	Actual pressure is within maximum and minimum settings for equipment	x	NA		
79	Timers set as per certification documentation	x	NA		
80	Alarms and trip functions operate correctly as per certification documentation	x	NA		
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA		
82	Automatic electrical protective devices operate within permitted limits	x	NA		
83	Automatic electrical protective devices are set correctly	x	NA		
84	Protective gas inlet temperature is below maximum specified	x	NA		
85	Ducts, pipes and enclosures are in good condition	x	NA		
86	Protective gas is substantially free from contaminants	x	NA		
87	Protective gas pressure and/or flow is adequate	x	NA		
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA		
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA		
90	Specific conditions of use (if applicable) are complied with		NA		
	Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA		
92	Cables are installed in accordance with the documentation	x	NA		
93	Segregation is maintained between IS and non-IS Circuits	x	NA		
94	Cable screens are isolated at one end (field side)	x	NA		
95	Cable screens are earthed in accordance with the documentation	x	NA		
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA		
97	Equipment installed is the one specified in the documentation	x	NA		
98	Ambient temperature range of the apparatus is correct for the installation	x	NA		
99	Service temperature range of the apparatus is correct for the installation	x	NA		
100	Installation is clearly labelled	x	NA		
101	Printed circuit boards are clean and undamaged	x	NA		
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA		
103	Point-to-point connections are all correct	x	NA		
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA		
105	Earth connections maintain the integrity of the type of protection	x	NA		
106	Intrinsically safe circuit earthing is satisfactory	x	NA		
107	Insulation resistance is satisfactory	x	NA		
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA		

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

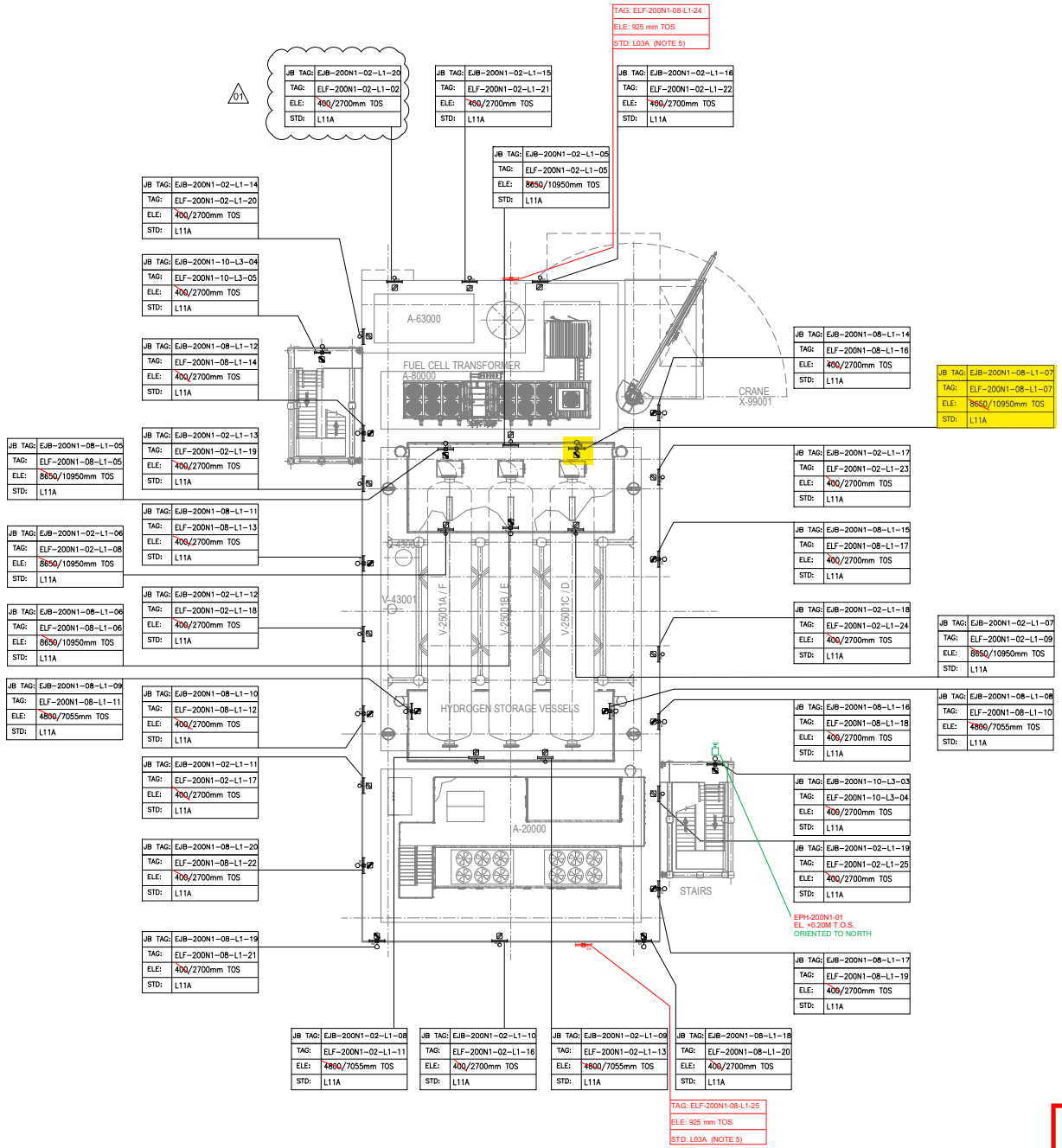
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

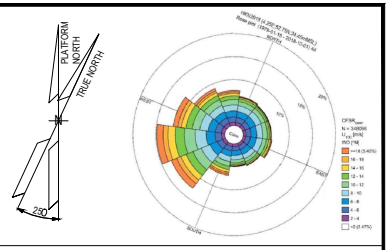
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-13	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:03:23.978Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-16T09:11:24.772Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

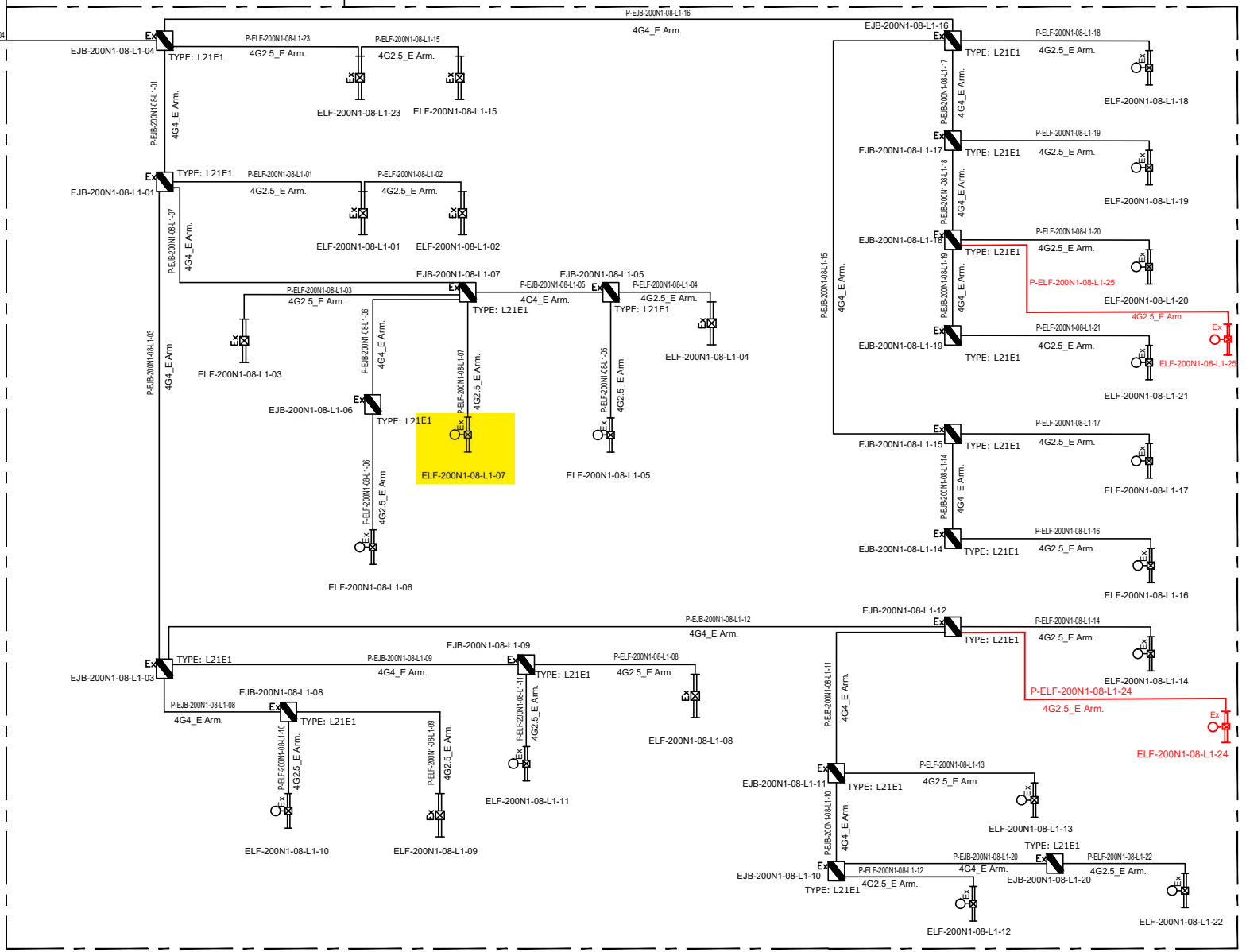
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

Q08 KL8 P-EJB-200N1-08-L1-04 4G4_E

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

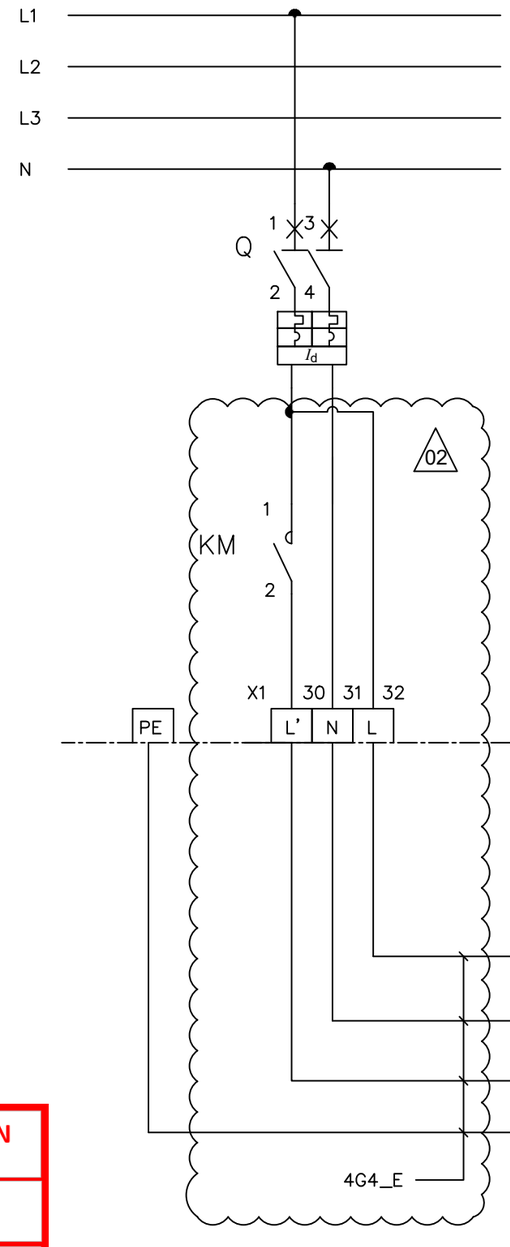
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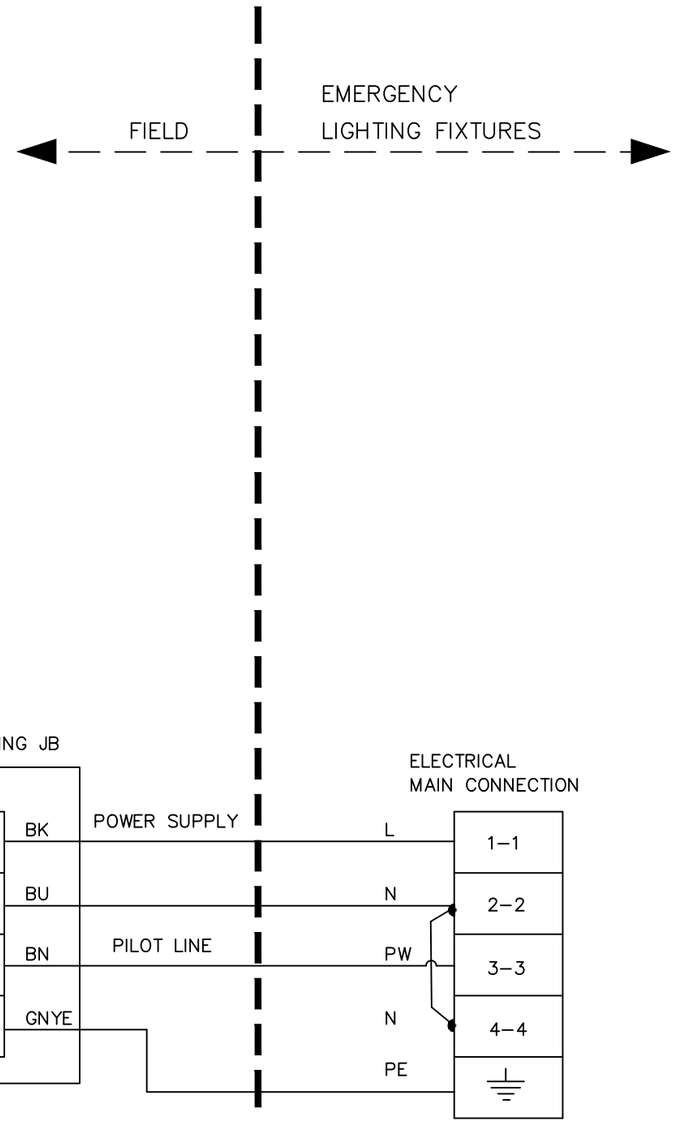
CROSSWIND

ROSETTI MARINO

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz





L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_B	20/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

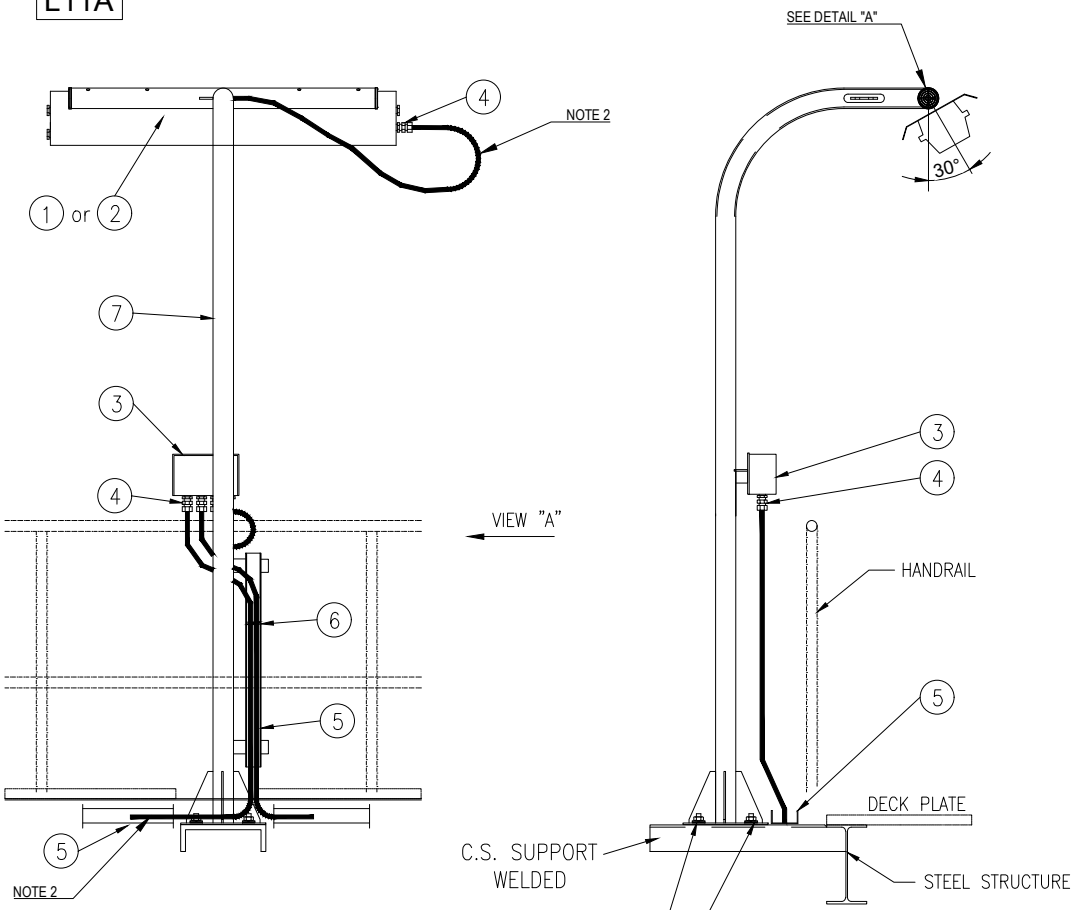
CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

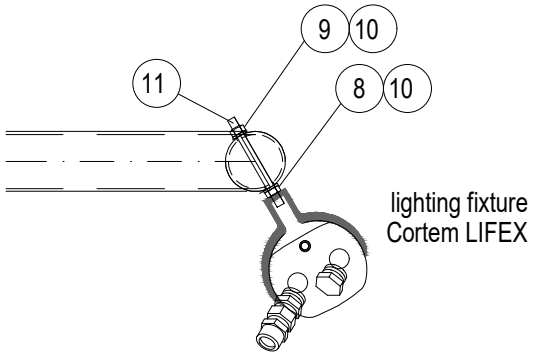
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L11A



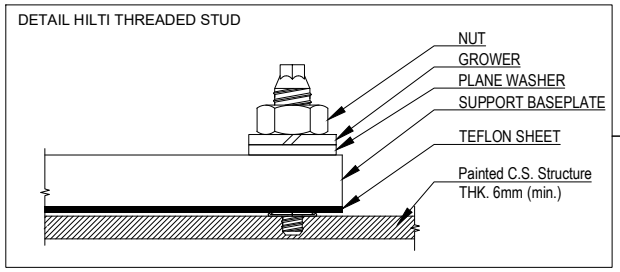
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

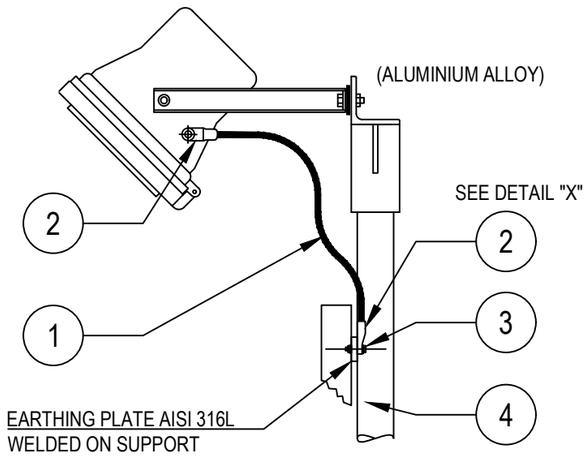
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

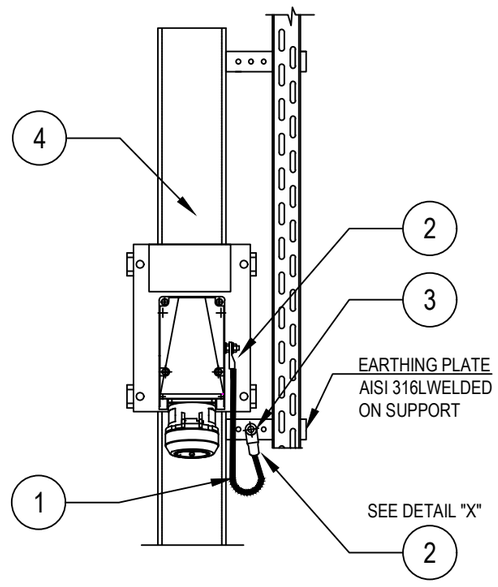
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

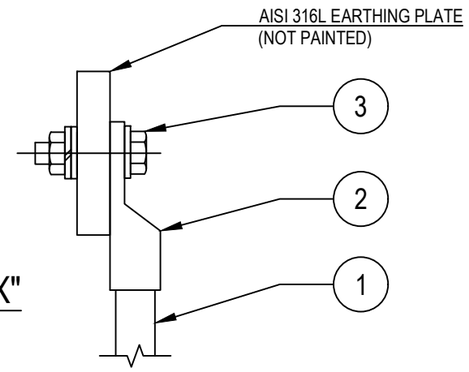
LIGHTING FIXTURE/GENERAL ITEM ON POLE



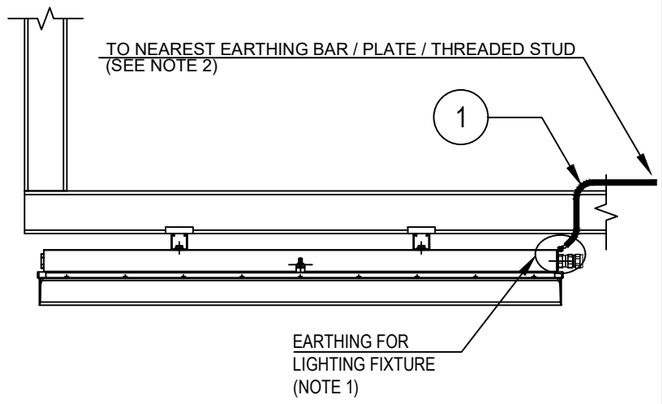
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

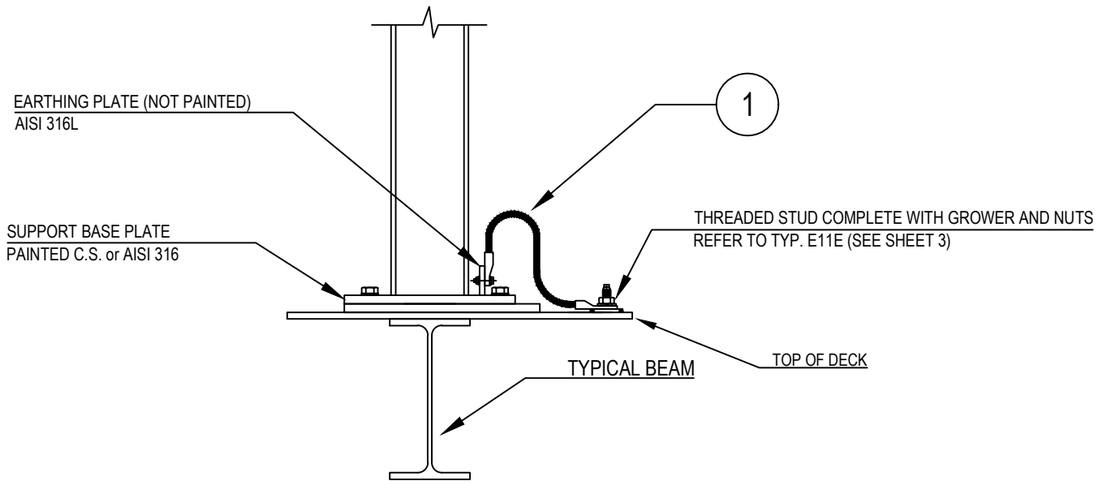
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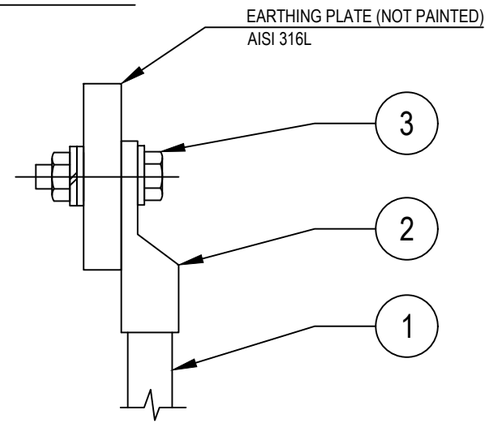
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

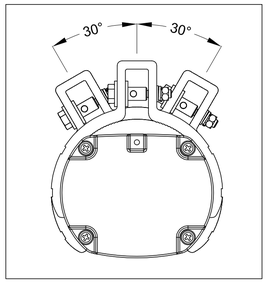
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

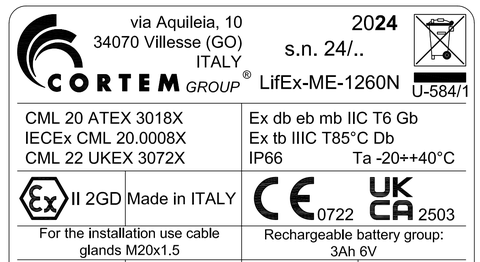
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



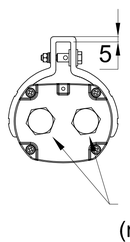
LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

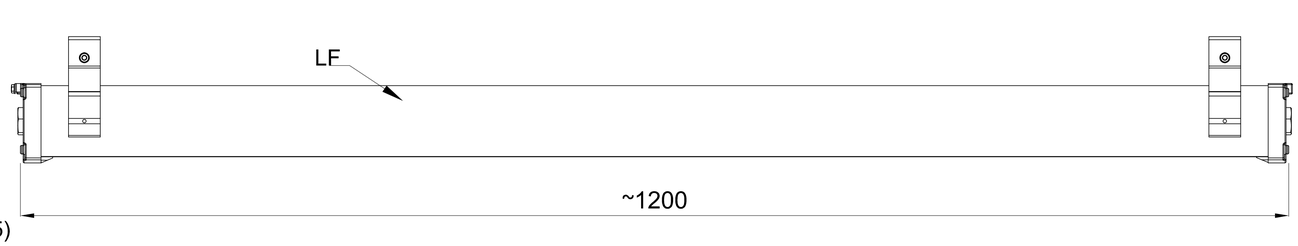
CERTIFICATE NAMEPLATE



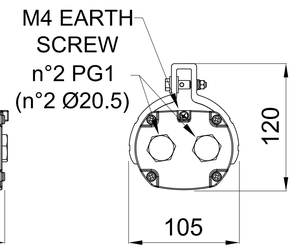
LEFT SIDE (OUT)



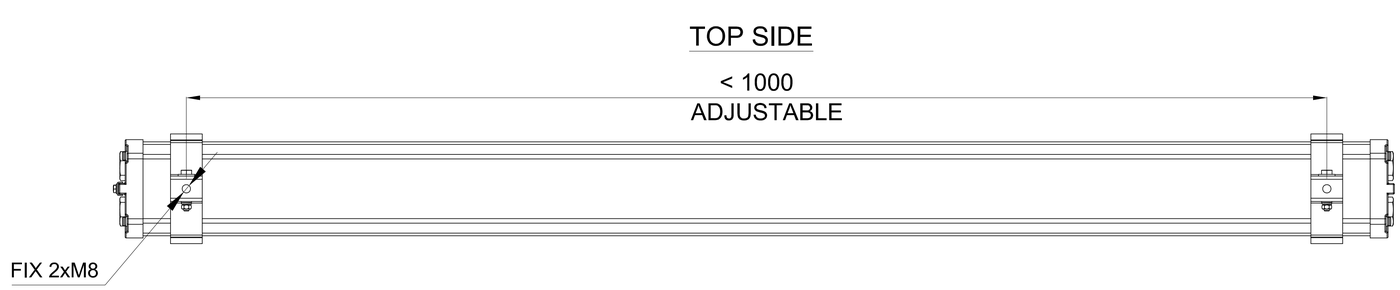
FRONT SIDE



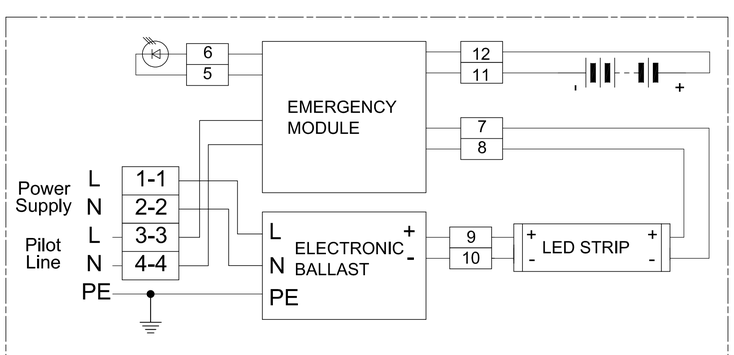
RIGHT SIDE (IN)



TOP SIDE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / NEXT /
TOT. 2

CORTEM GROUP
cortem
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AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

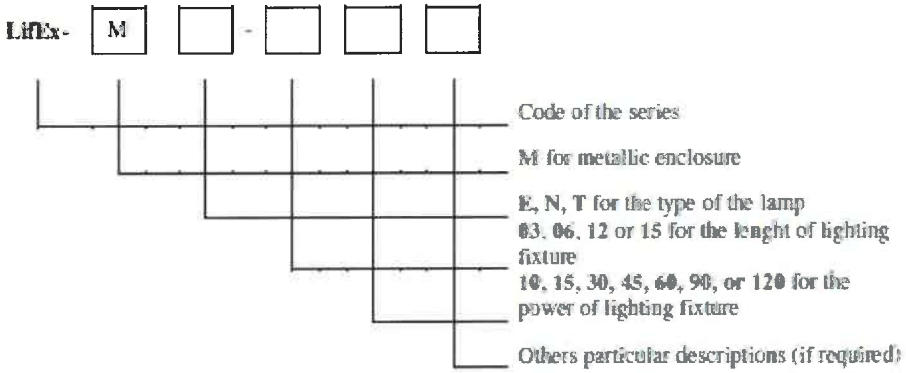
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

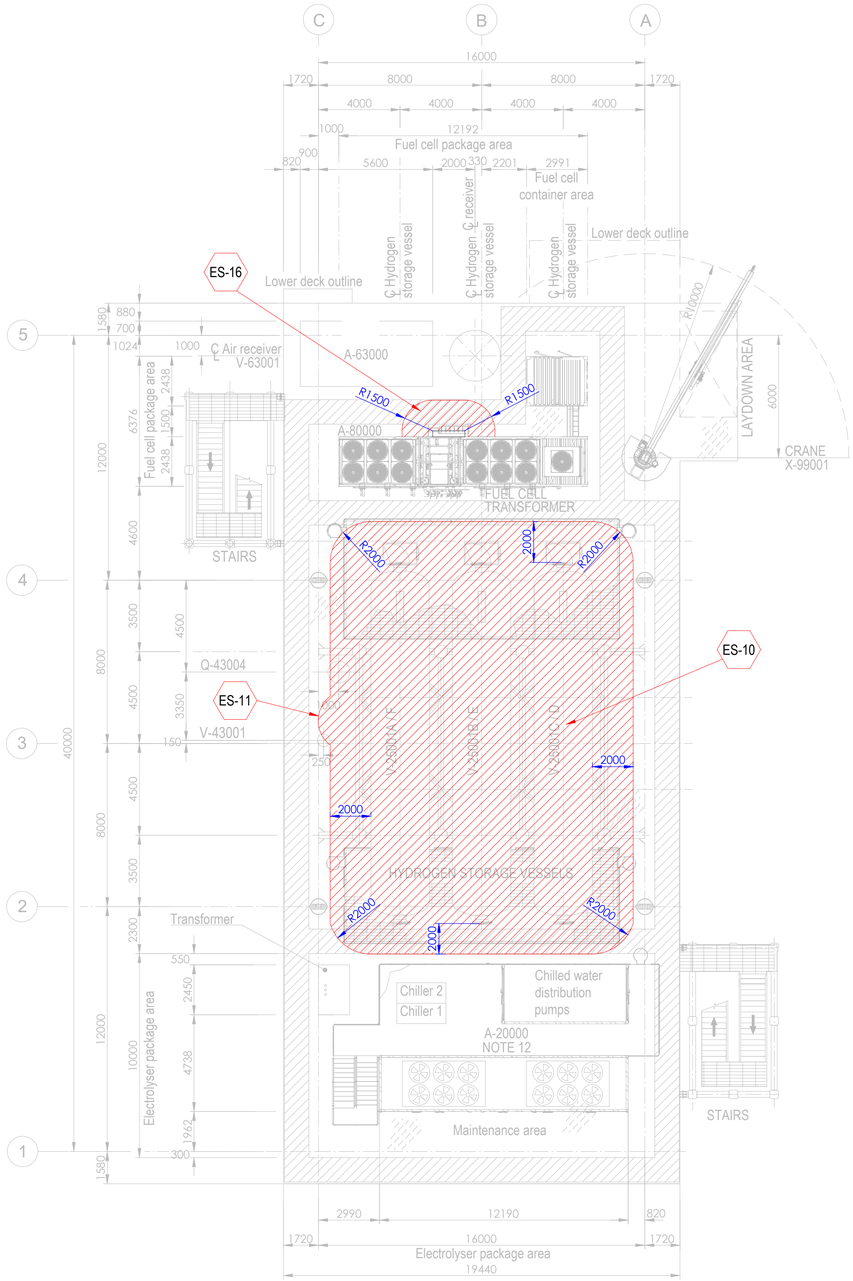
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

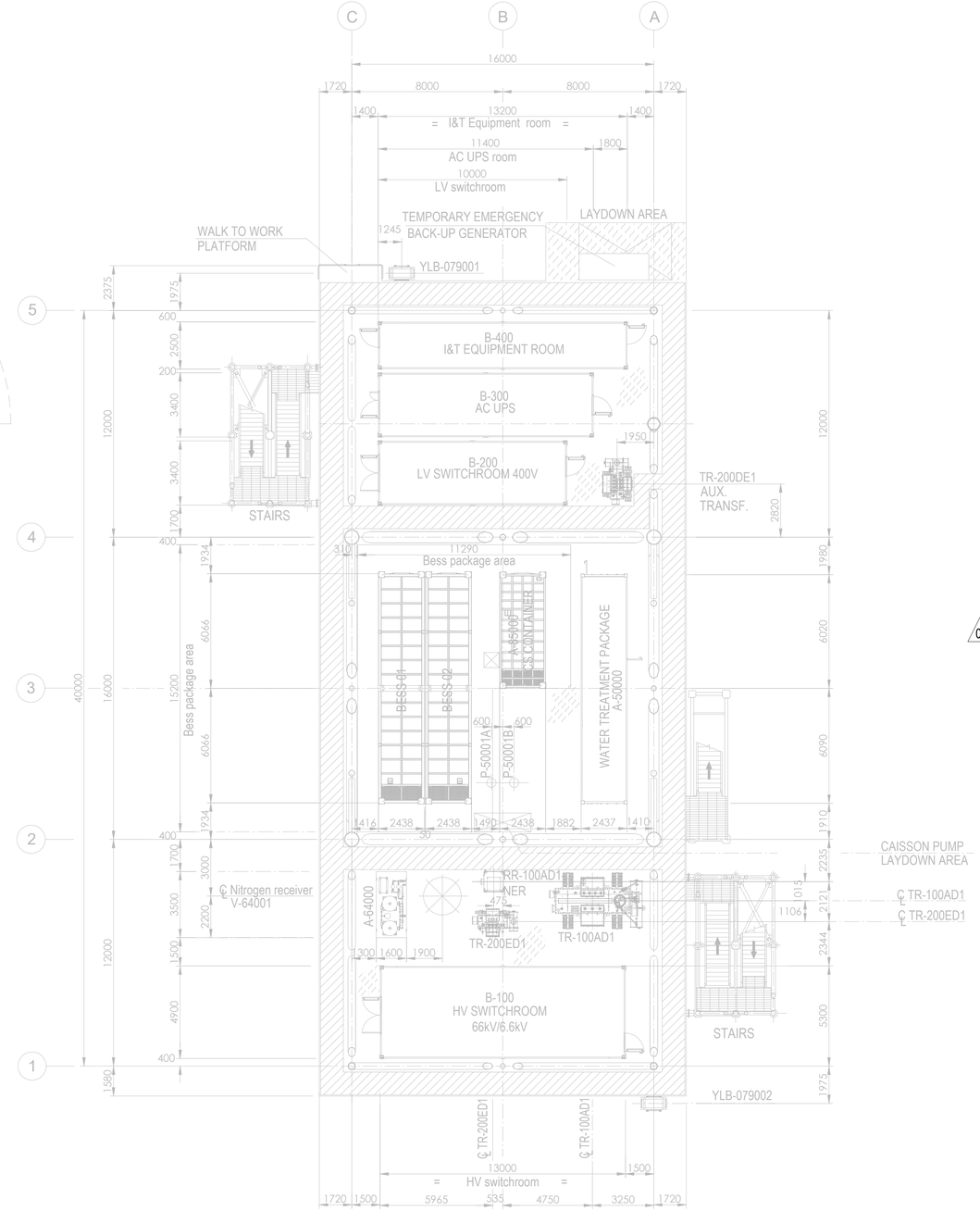
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



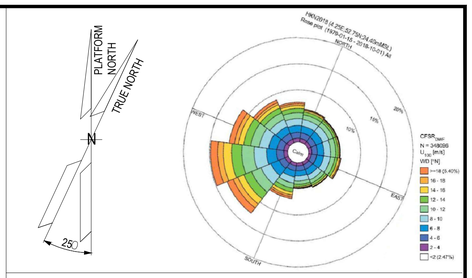
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

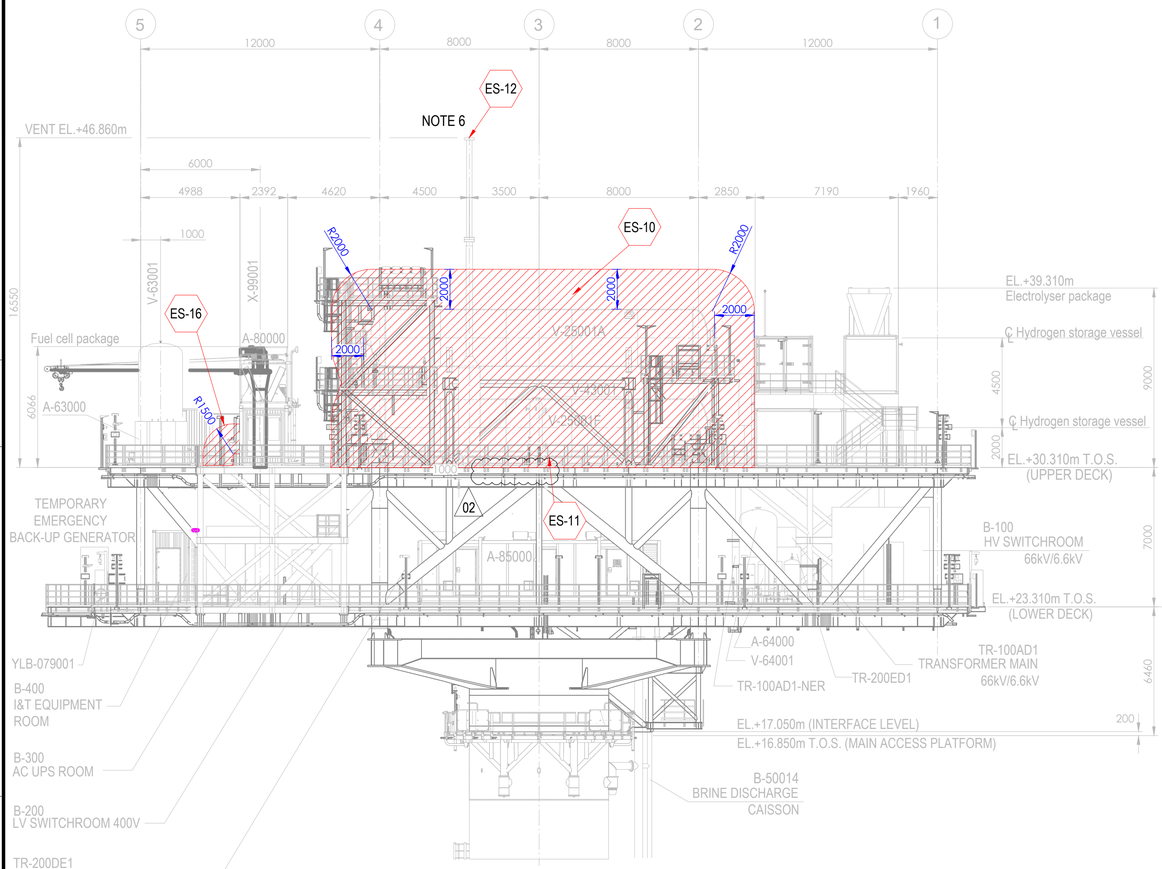
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

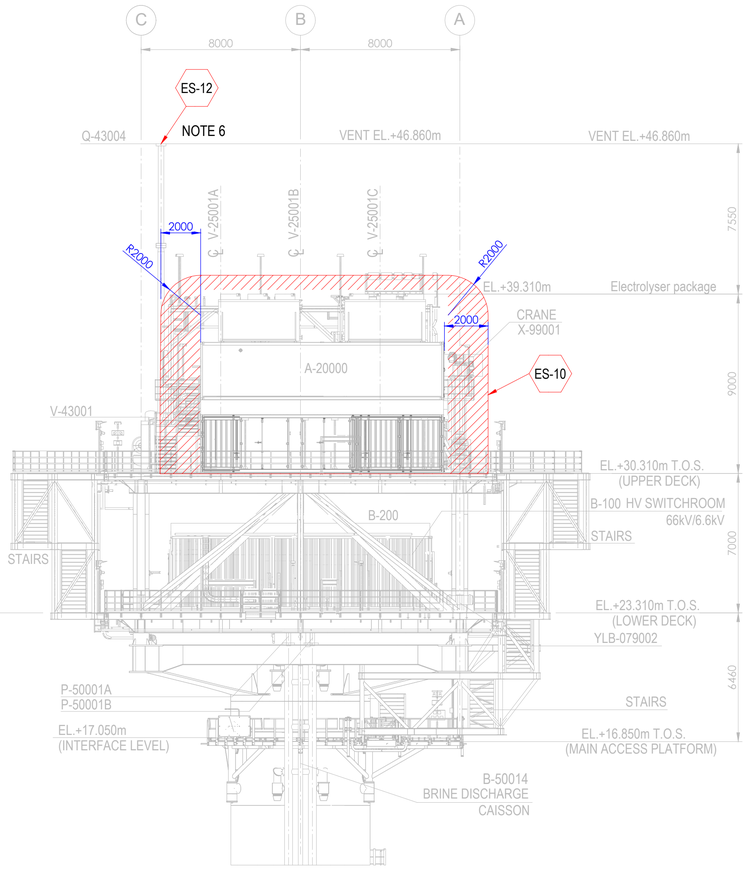
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

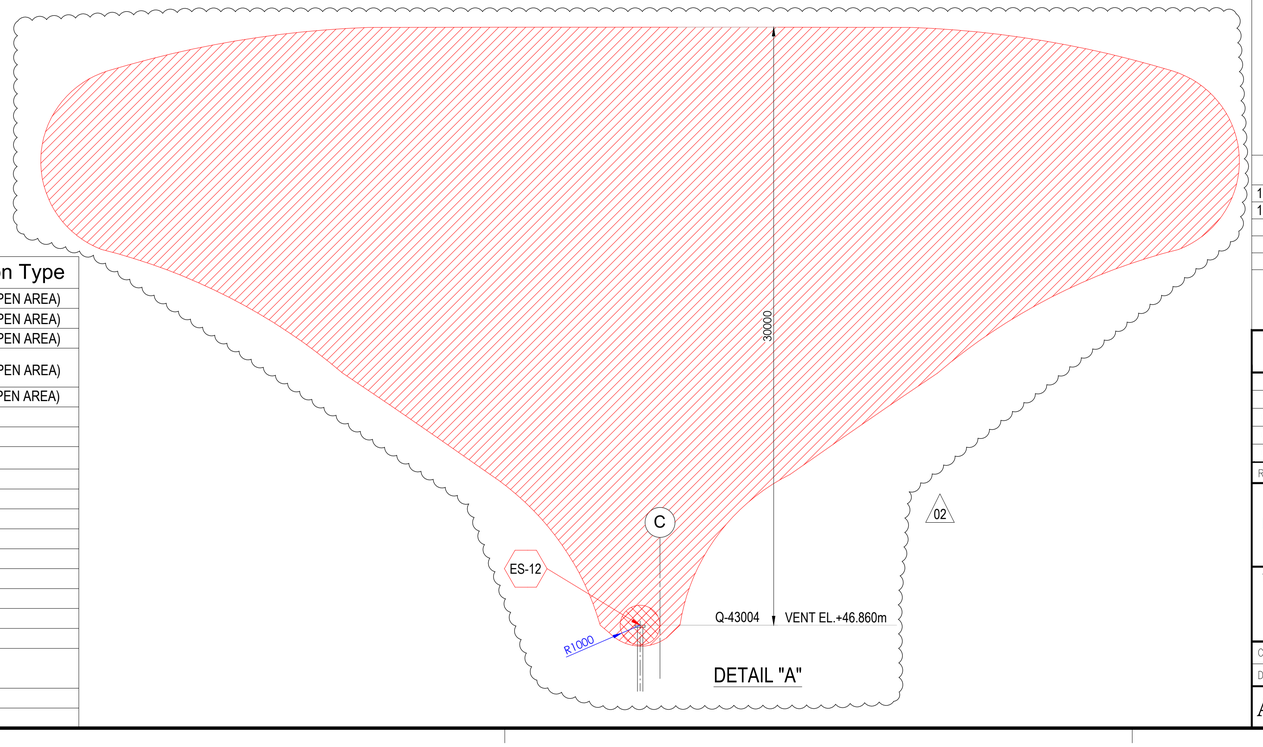


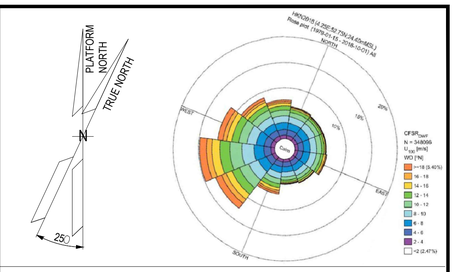
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-08	: EMERGENCY LIGHT	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001684	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-08	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001684		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	PL	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-08	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001684		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

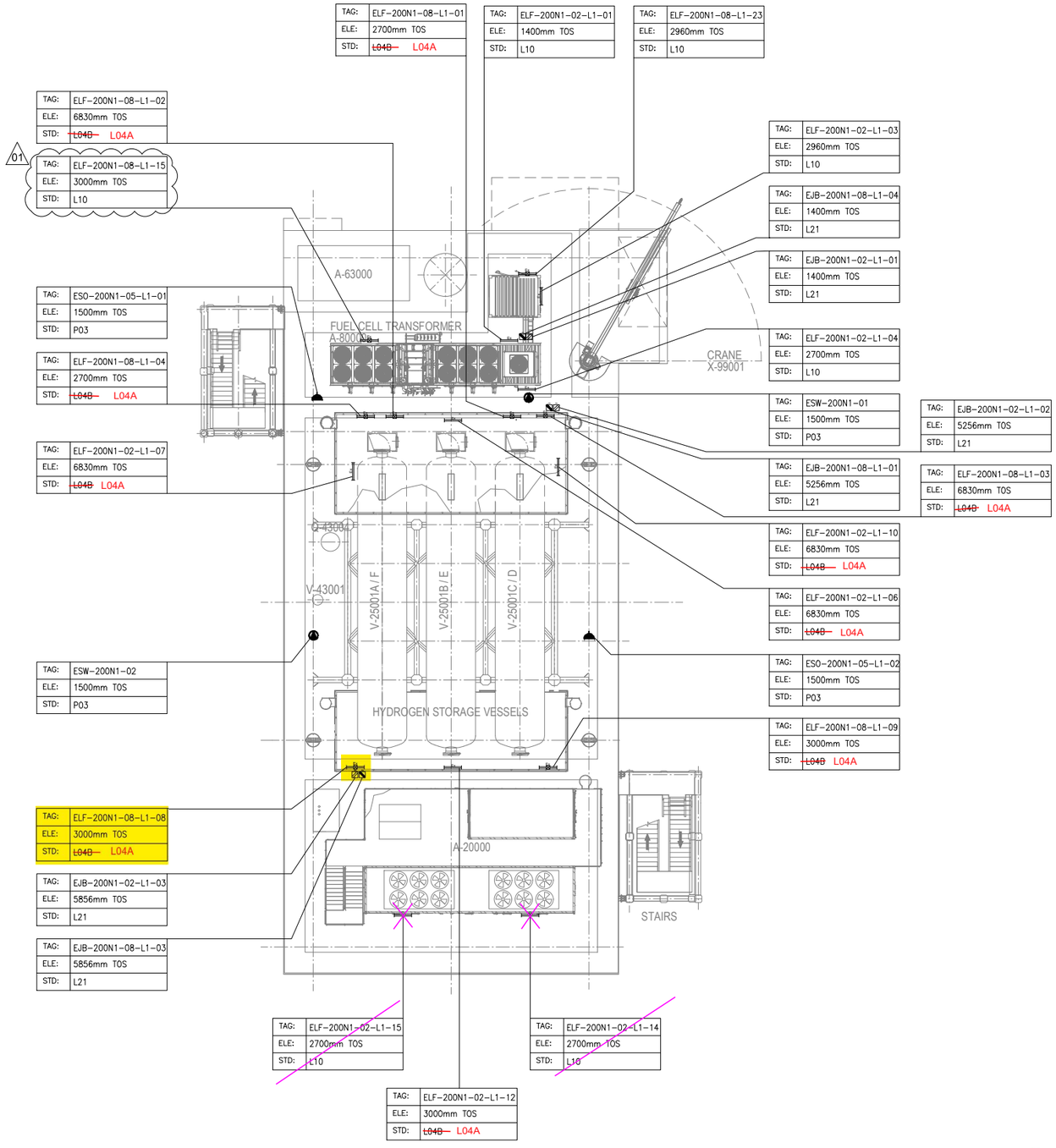
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

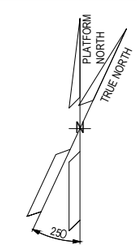
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Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-08	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:04:07.811Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-16T09:32:49.695Z	

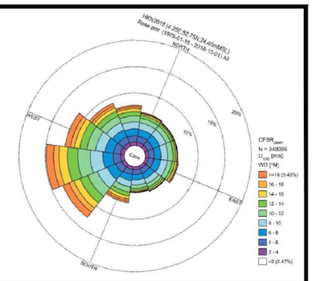
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

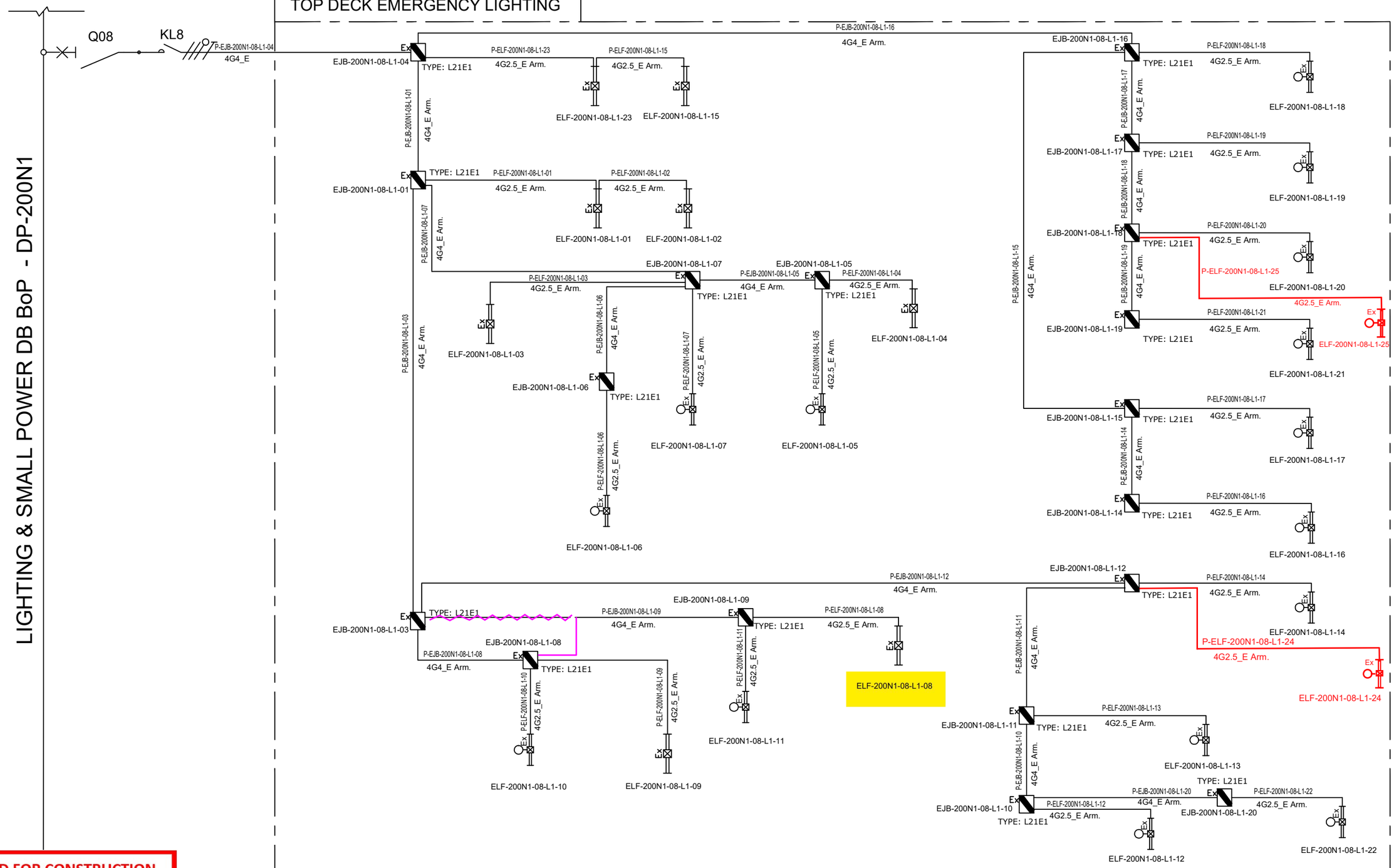
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150	
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

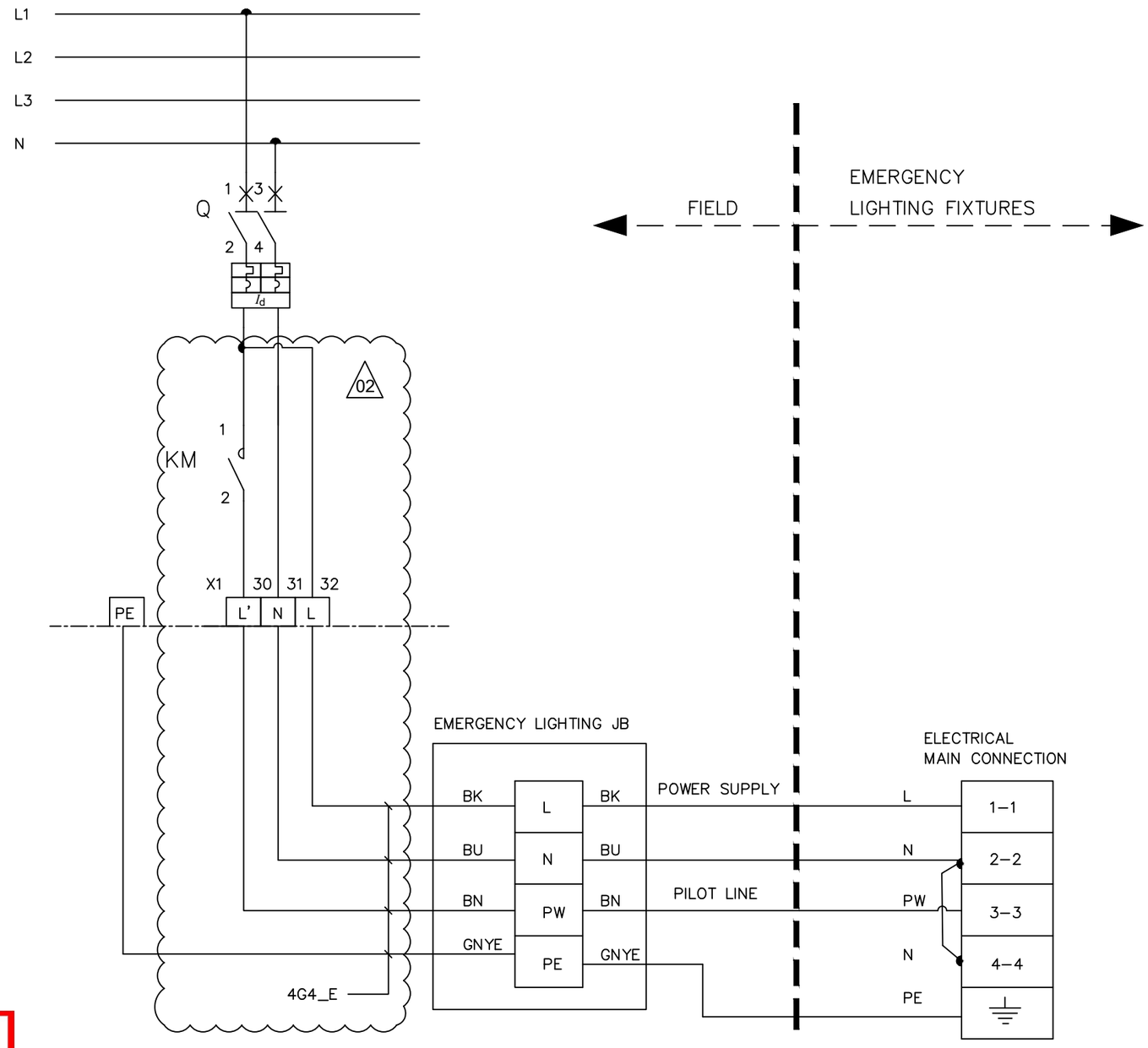
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

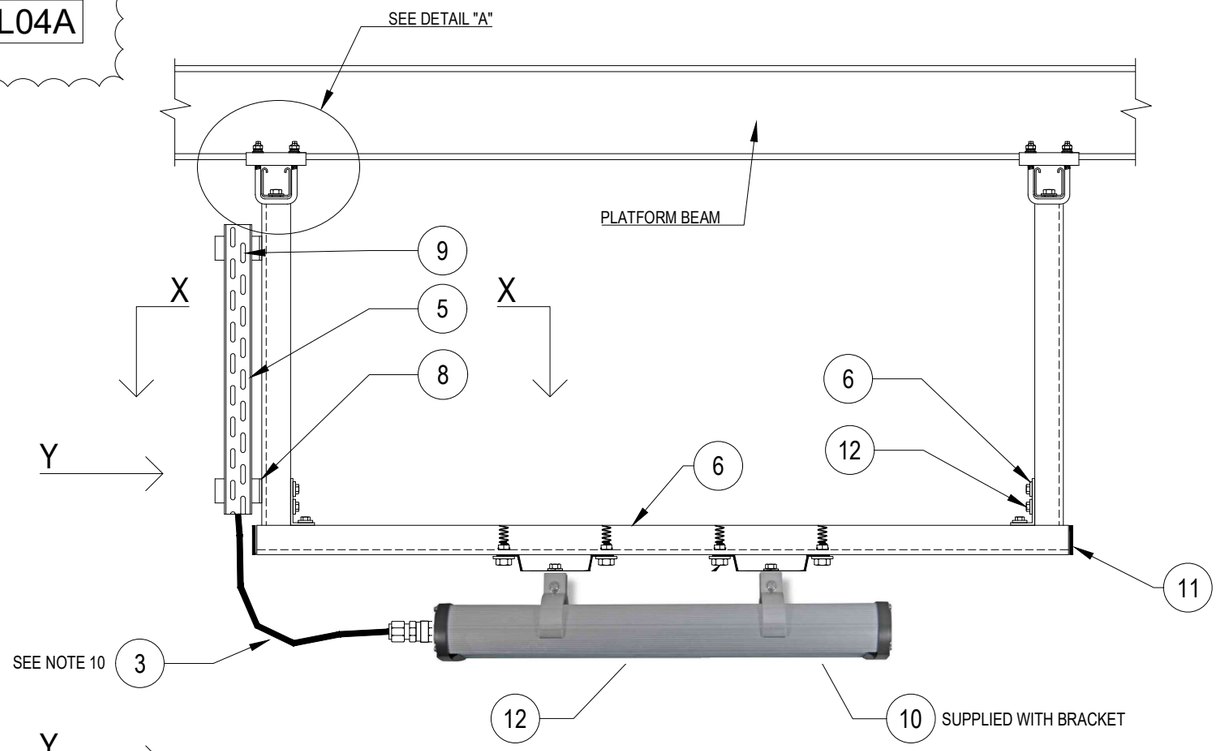
SHEET 014

REV. 02

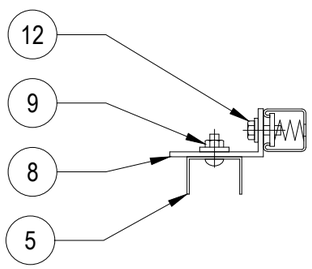
F.to UNI A3: 420mmx297mm

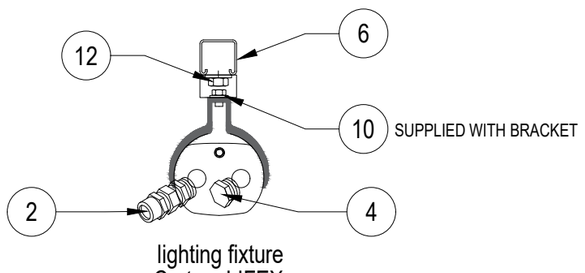
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L04A

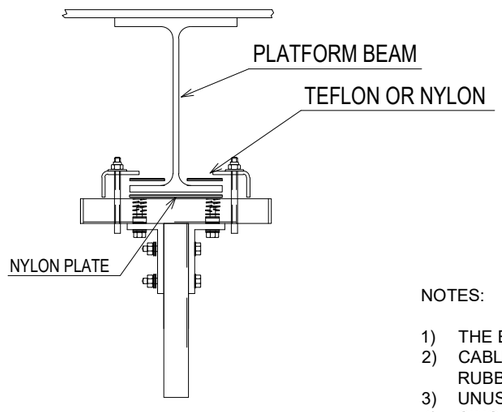


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex e) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		1	NOTE 2 NOTE 5
3	ARMOURED/UNARMOURED CABLE				NOTE 5
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE LADDER OR PERFORATED TRAY	AISI 316L		AS REQ.	
6	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2	AS REQ.	
7	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE	AISI 316L		2	NOTE 4
8	PLATE FOR ORTHOGONAL-TRASVERSAL CONNECTION (3 HOLES)	LPDE		4	
9	ROUND HEAD SCREW WITH SQUARE NECK COMPLETE WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L			
10	HEX. BOLT M8X16 WITH LARGE PLANE WASHER	AISI 316L		2	
11	PLUG FOR U-CHANNEL	LPDE		2	
12	HEX. BOLT M10X30 WITH PLANE WASHER, NUT FOR U-CHANNEL AND SPRING	AISI 316L		2	

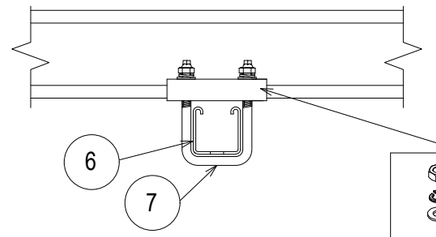




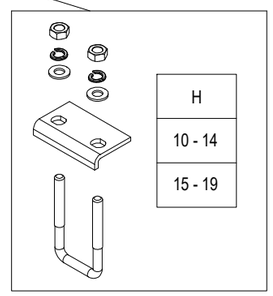
02



DETAIL "A"



VIEW "A"



NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.
5) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
FIXTURE SUSPENSION MOUNTED WITH U–CHANNEL SUPP.

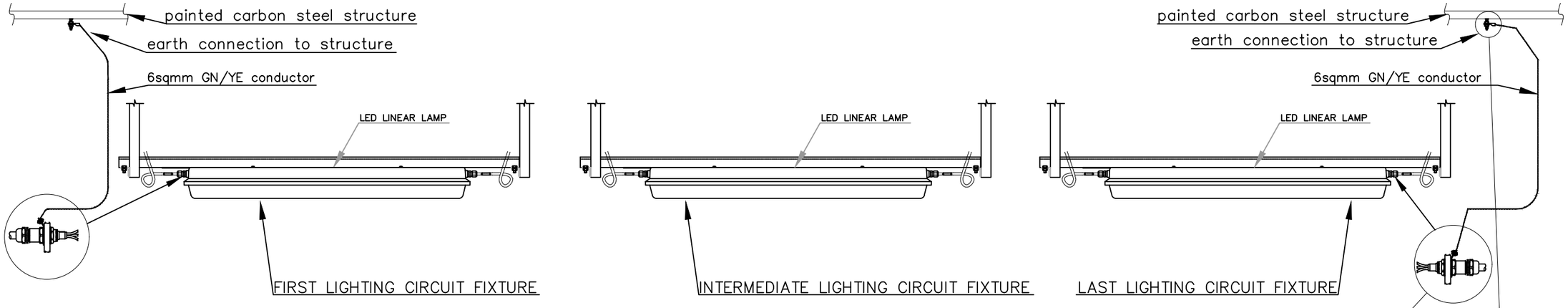
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 006 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

E32

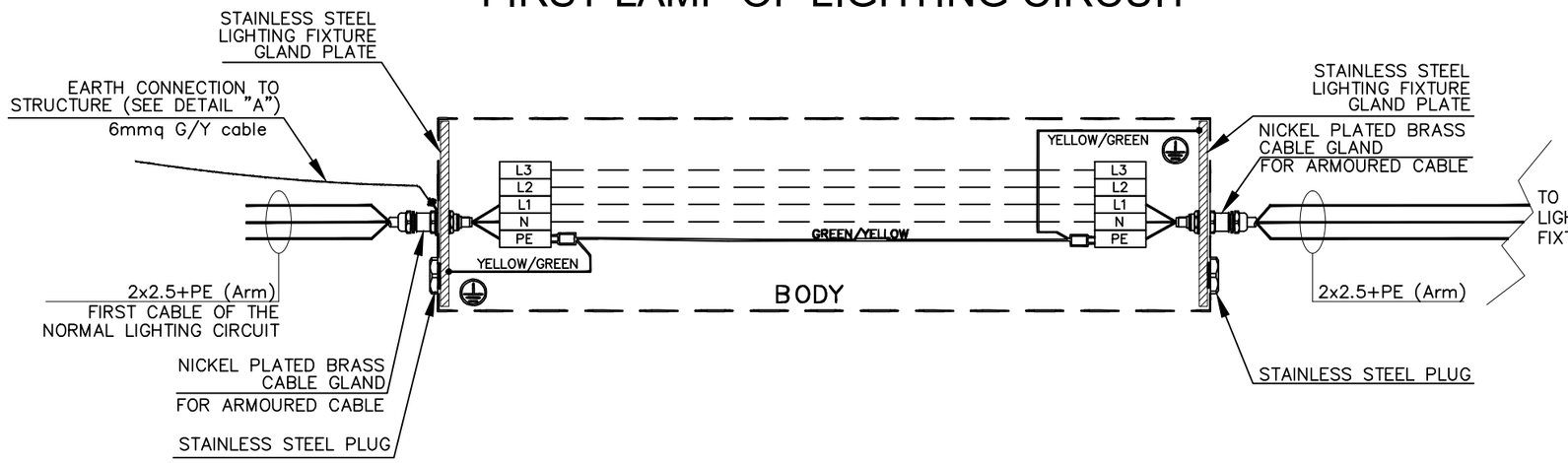


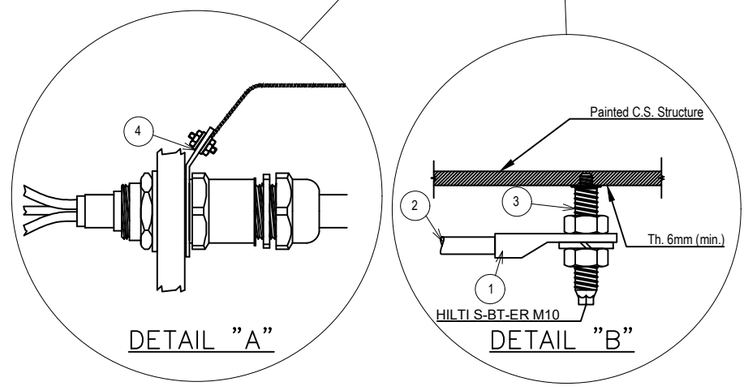
ONLY the first and the last lighting fixture of all circuits are connected to earthing system. The earthing continuity of the intermediate lighting fixtures of the circuits is guaranteed by the using of the first and the last lighting fixture earthing connection which is permanently connected to the earthing system as per the typical below.

Refer also to TYP. "E05" for Lighting Fixtures.

NORMAL LIGHTING CIRCUIT EARTHING CONTINUITY TYPICAL

FIRST LAMP OF LIGHTING CIRCUIT





POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			
2	Y/G INSULATING COPPER CONDUCTOR		6sqmm	ASR	
3	HILTI S-BT-ER M10/15 SN6 C/W NUTS AND GROWER	AISI 316L	M10X28		NOTE 1
4	CABLE GLAND EARTH TAG	NPB	M20		

The same logic is used for the earthing continuity of Emergency Lighting Circuits. The above typical has been done to represent the Earthing Continuity of G/Y conductors, the correct connections of all conductors in the respective Terminal Strips are shown in doc. AR-FEN-10-ROEC-600132 Lighting and Socket Circuit Diagrams.

NOTES:
1) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM FOR SINGLE EQUIPMENTS EARTHING CONNECTION.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING – OUTDOOR LINEAR LIGHTING FIXTURE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 023 | REV. 02

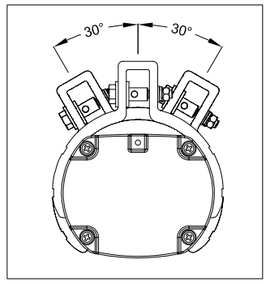
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

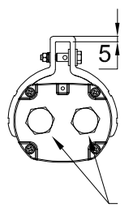
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

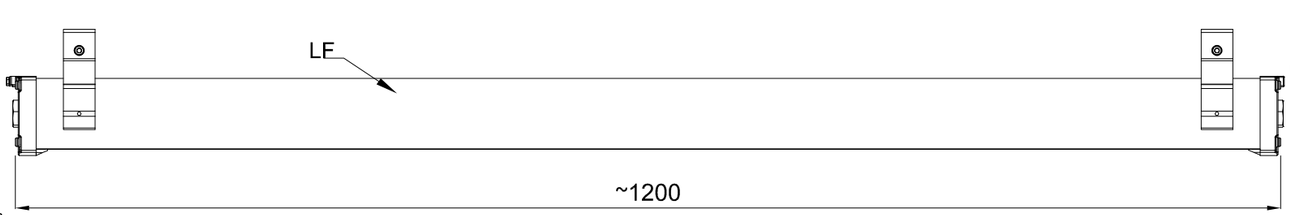
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

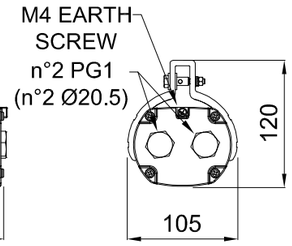


n°2 PG1
(n°2 Ø20.5)

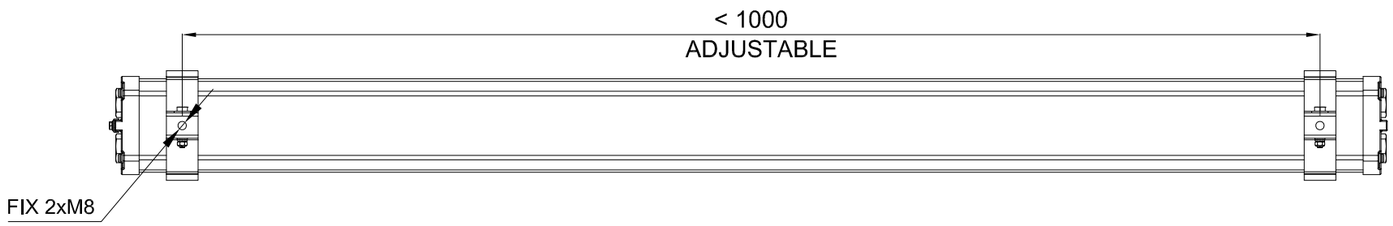
FRONT SIDE



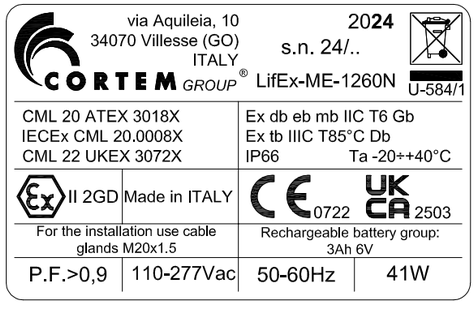
RIGHT SIDE (IN)



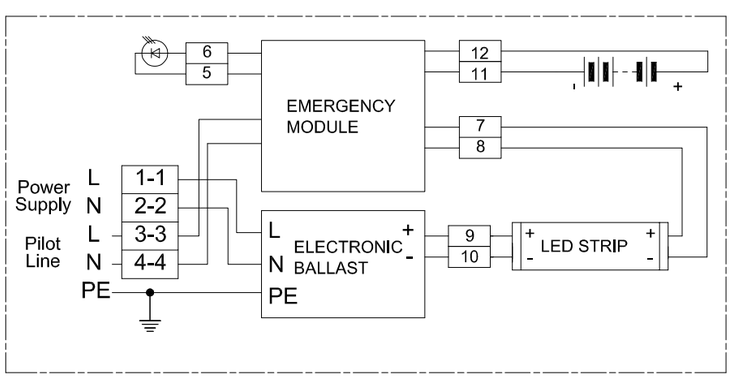
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

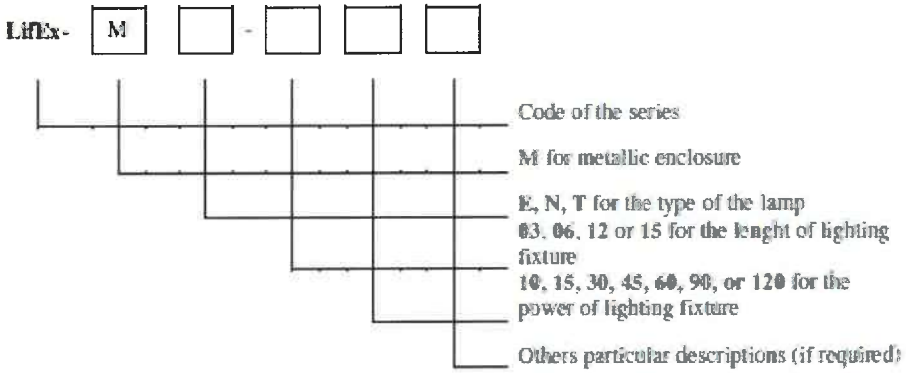
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

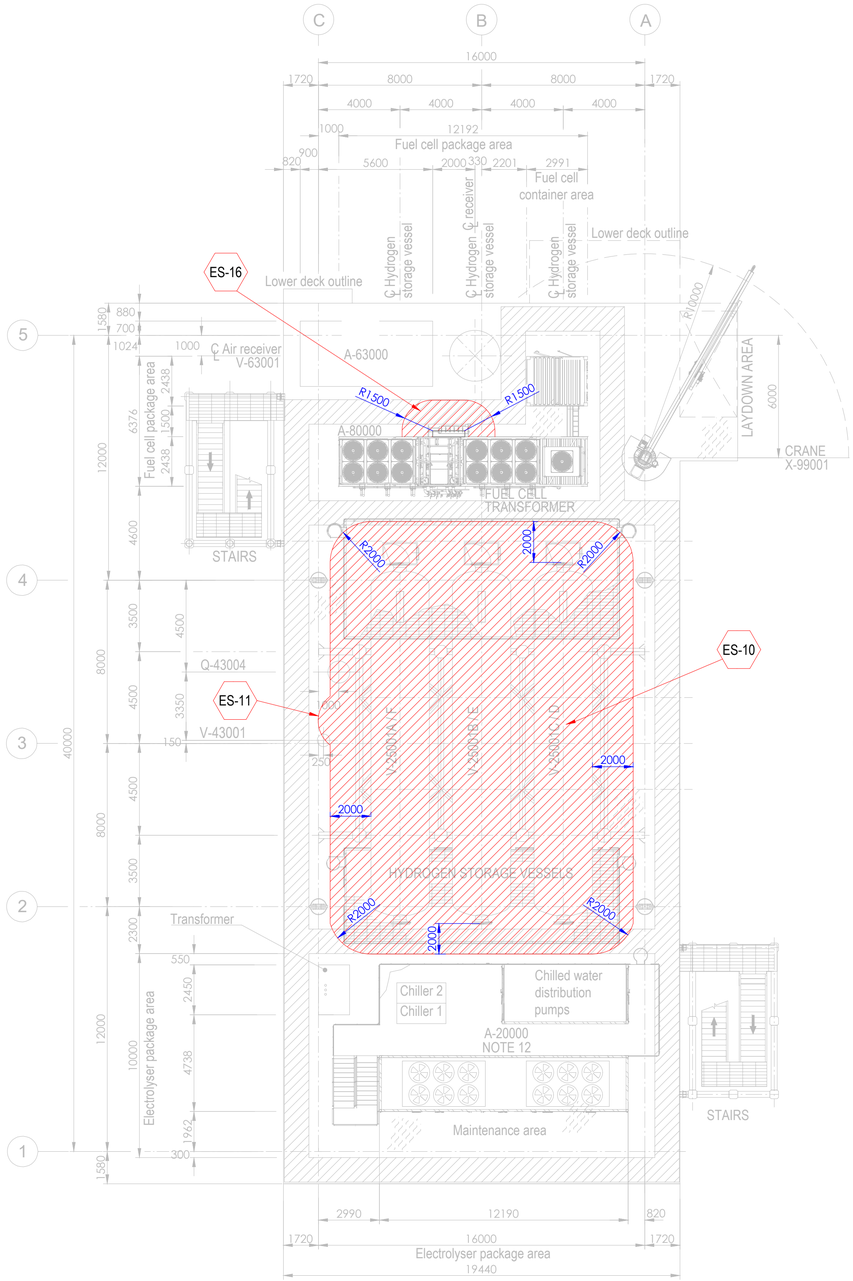
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

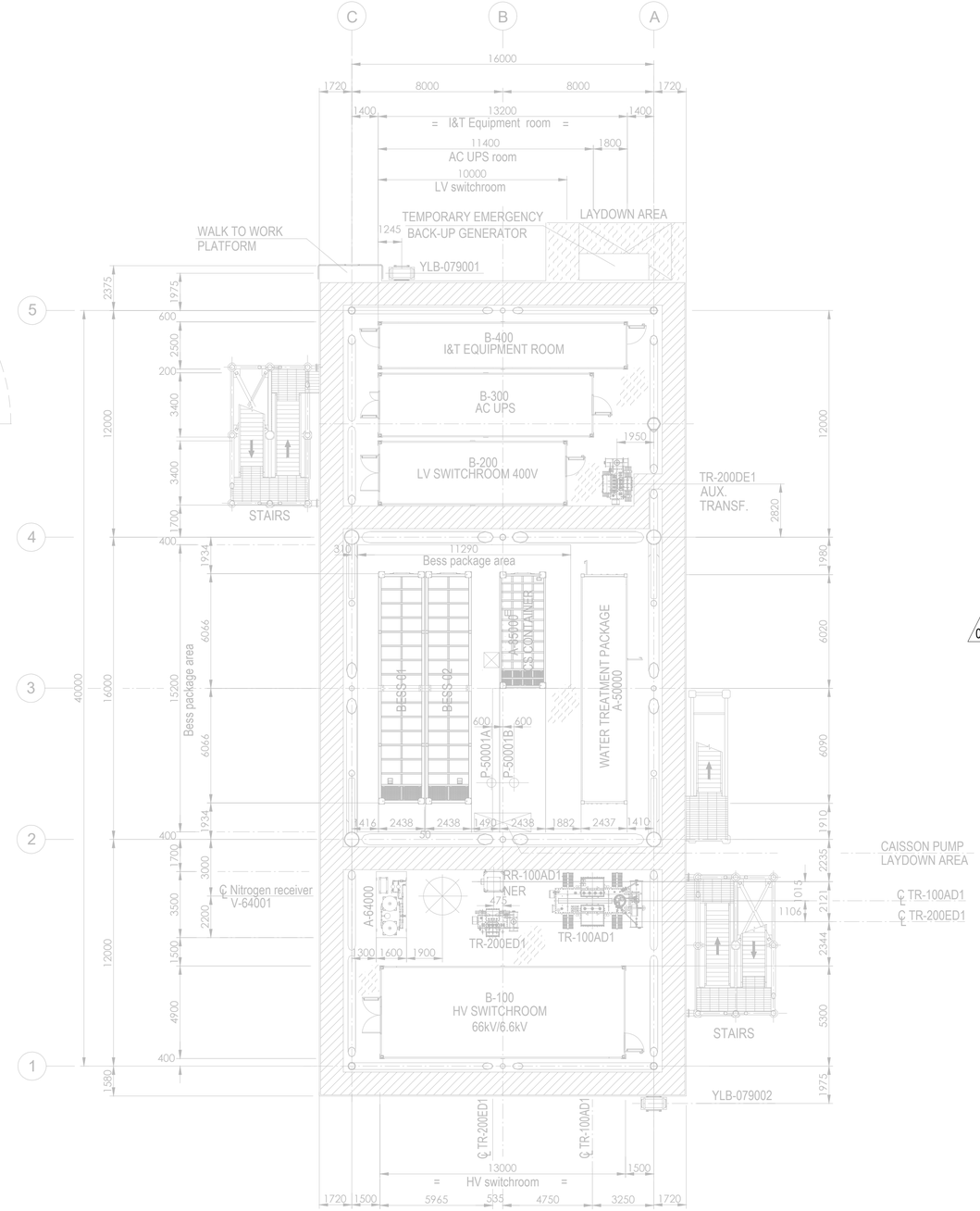
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



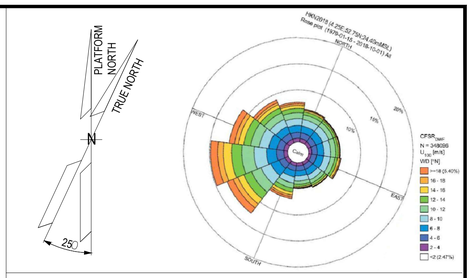
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

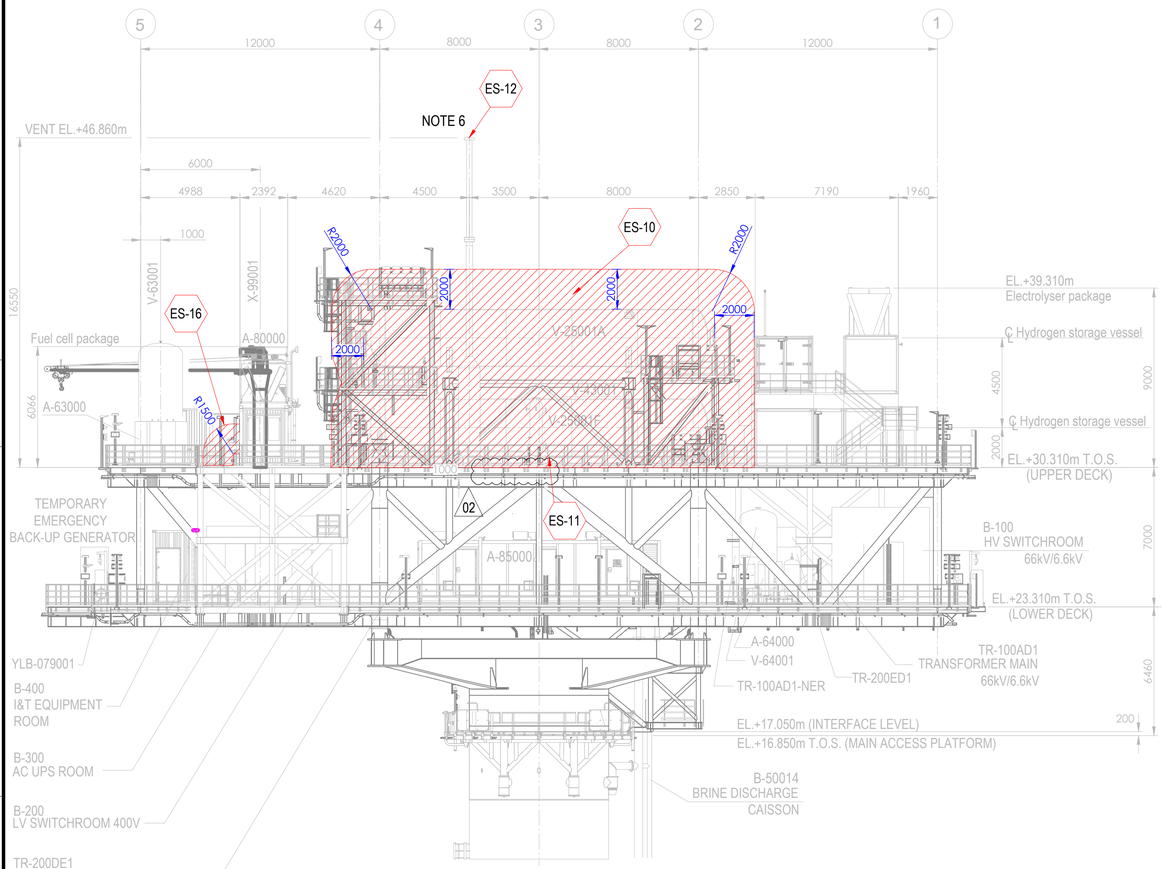
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

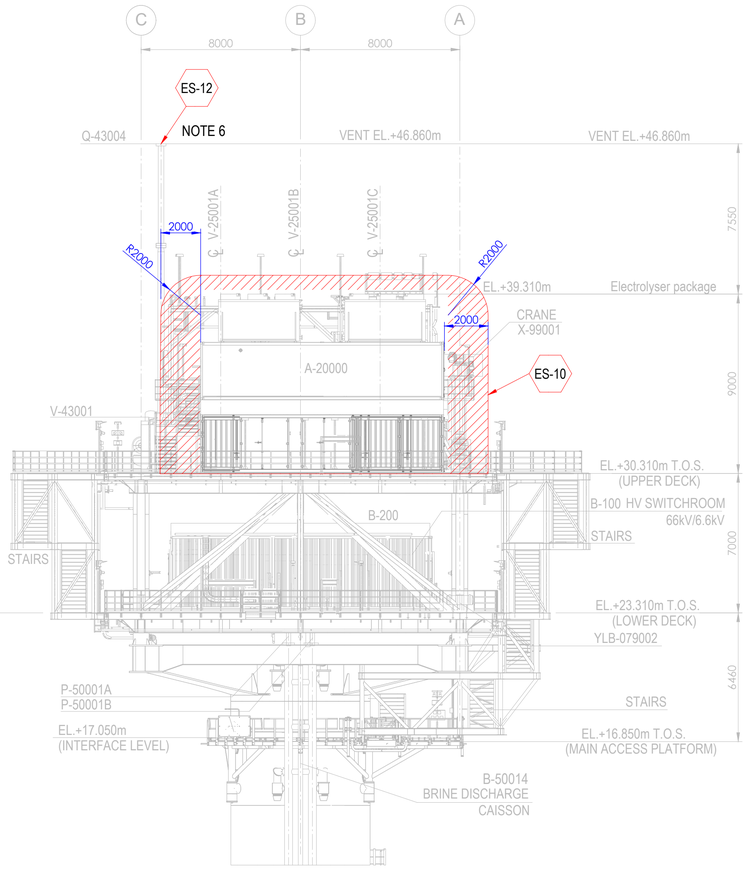
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REV. 02

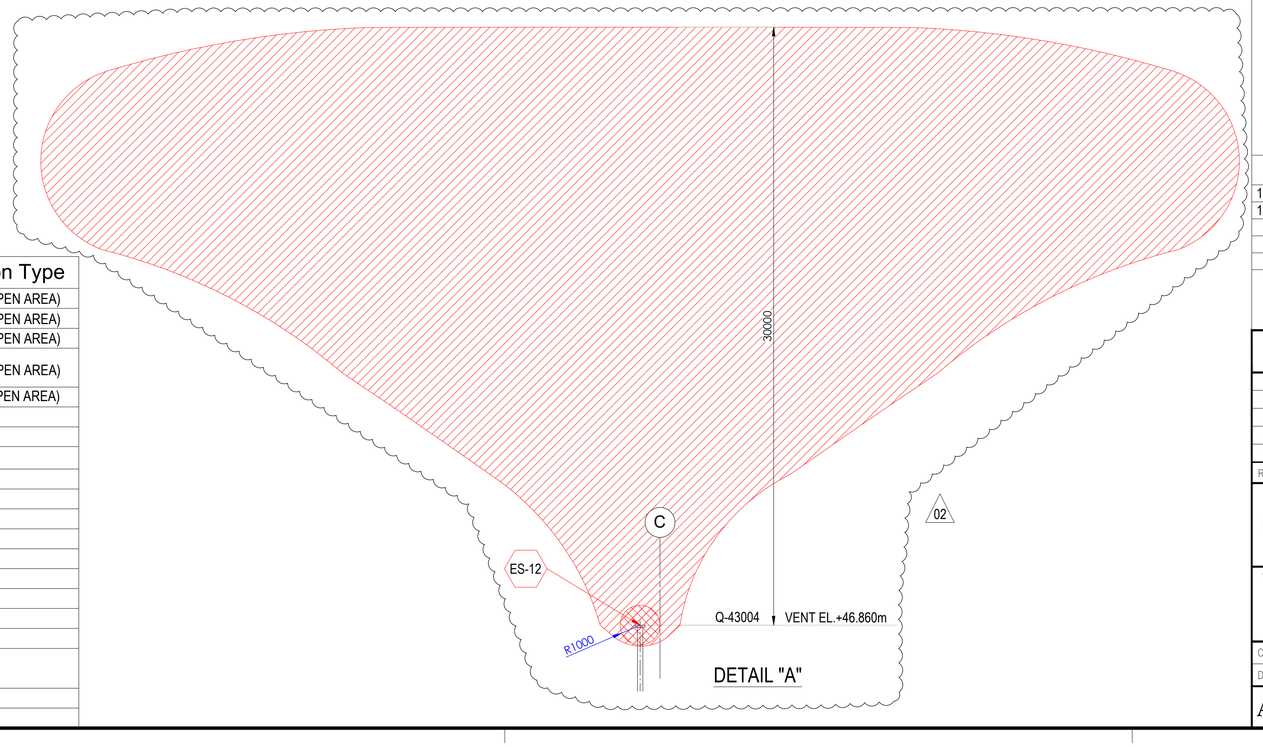


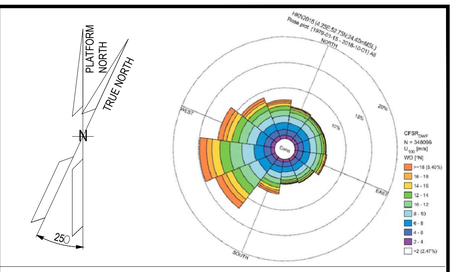
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-09	: EMERGENCY LIGHT	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001685	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		PL	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-09	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001685		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	PL	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-09	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001685		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

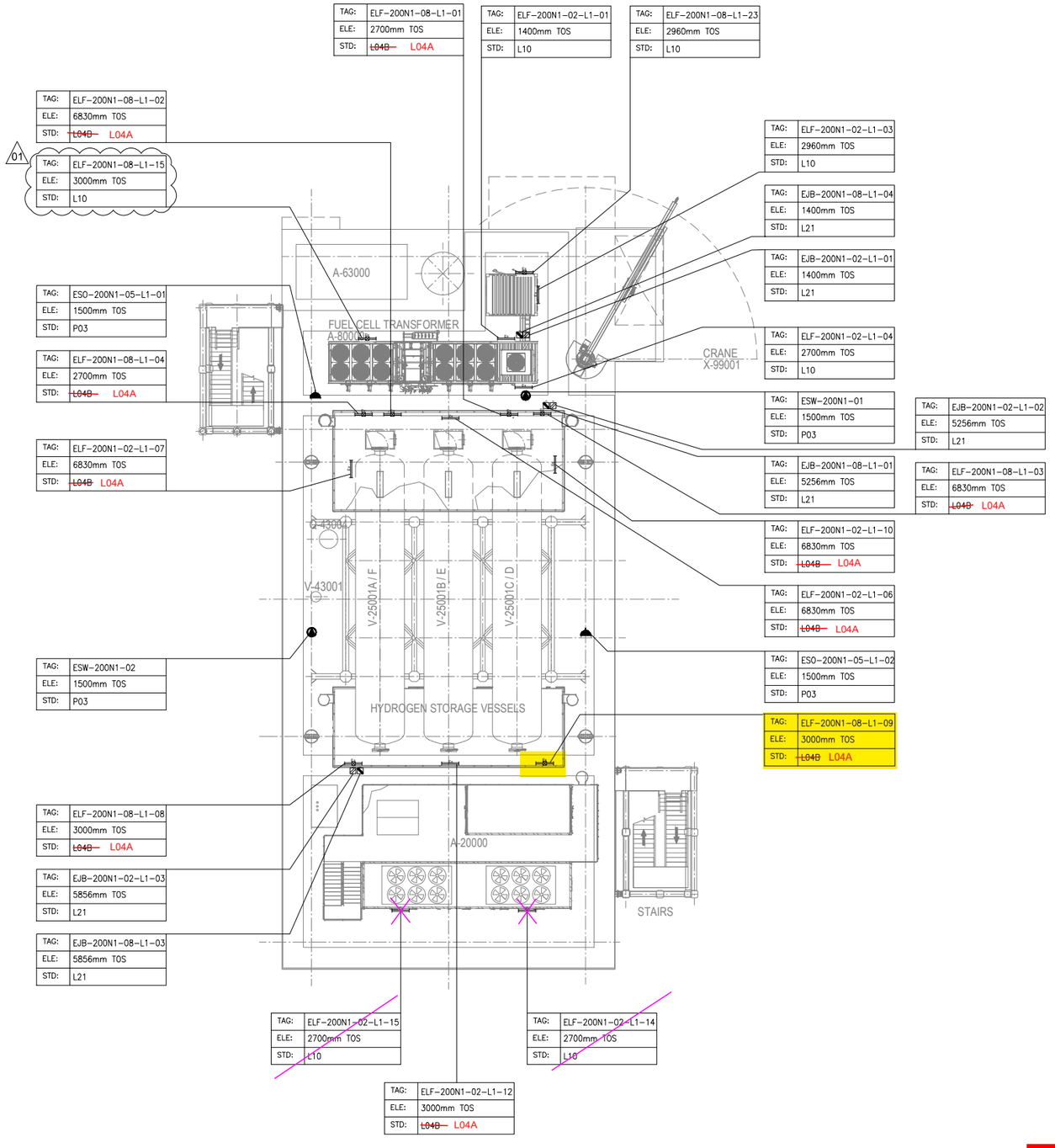
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

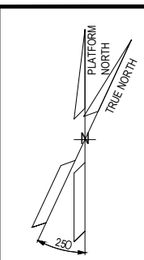
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-13	2025-01-16	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-13T09:03:37.559Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-16T09:26:26.962Z	

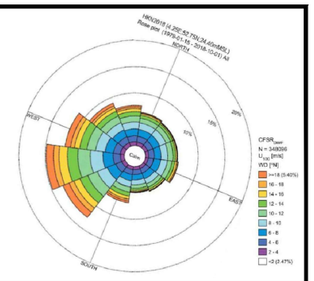
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

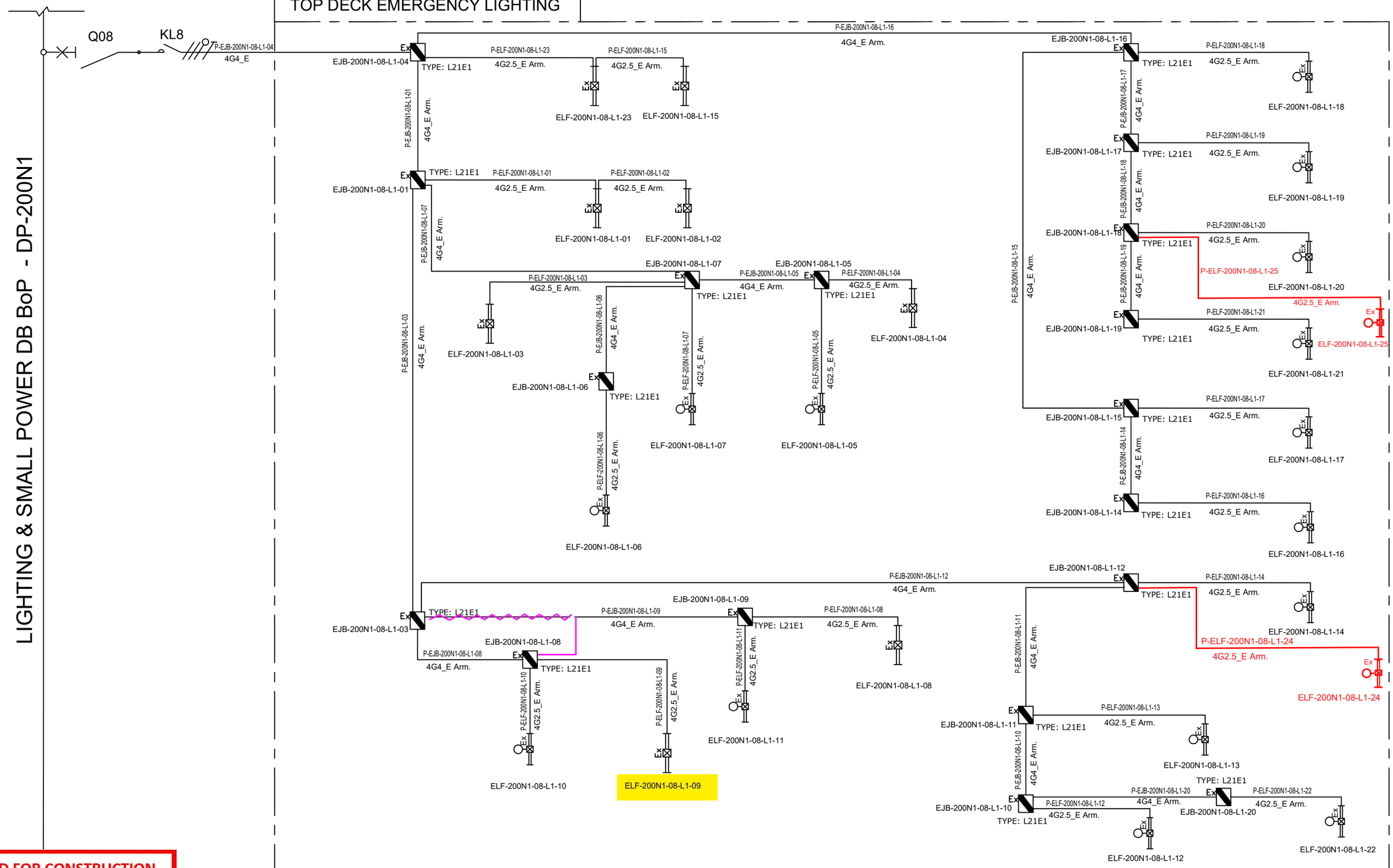
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO		DATE	01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118			SHEET 2of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

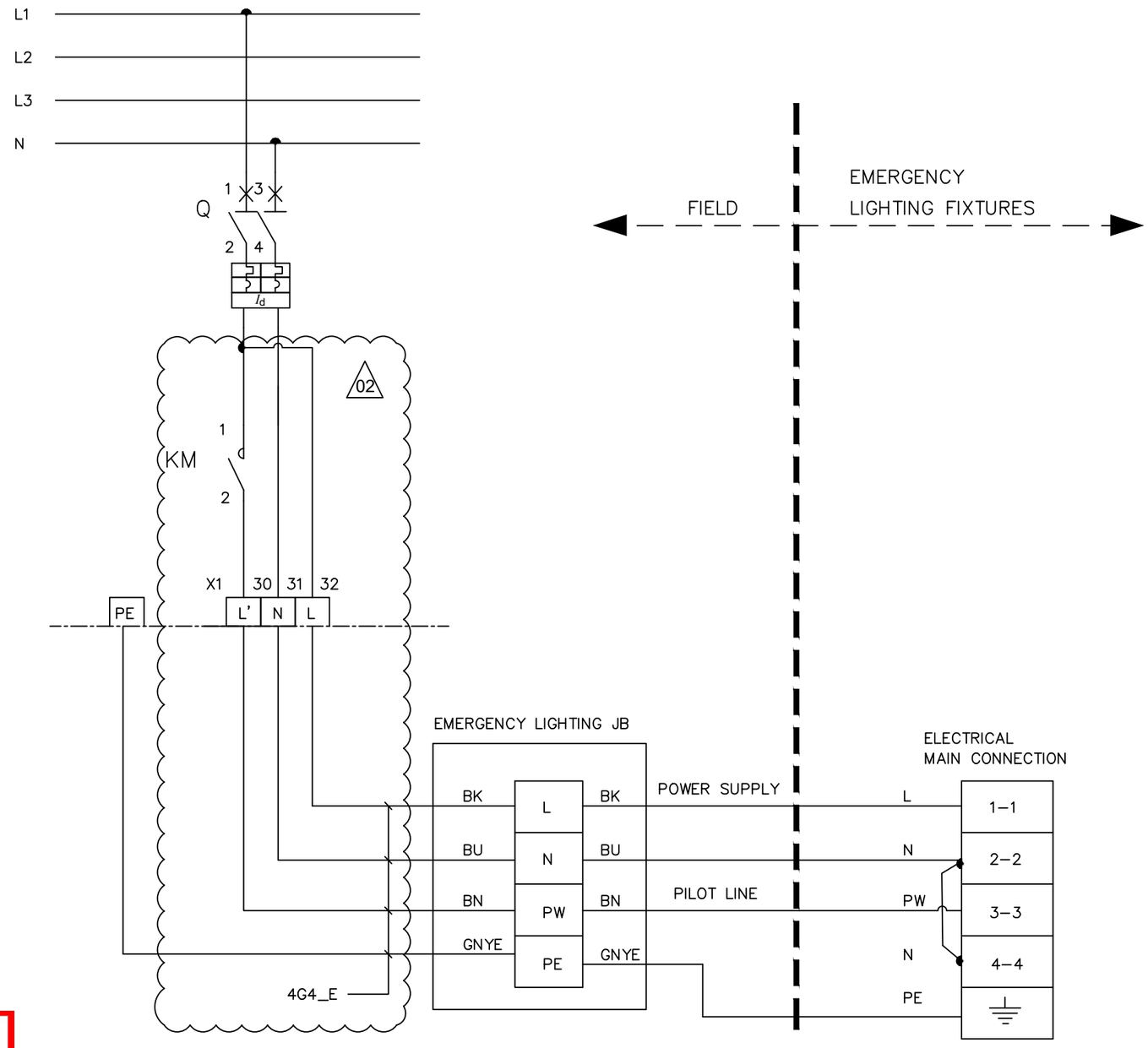
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DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20152**

REV.:	DATE:	SIGNATURE:
2_F	14/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

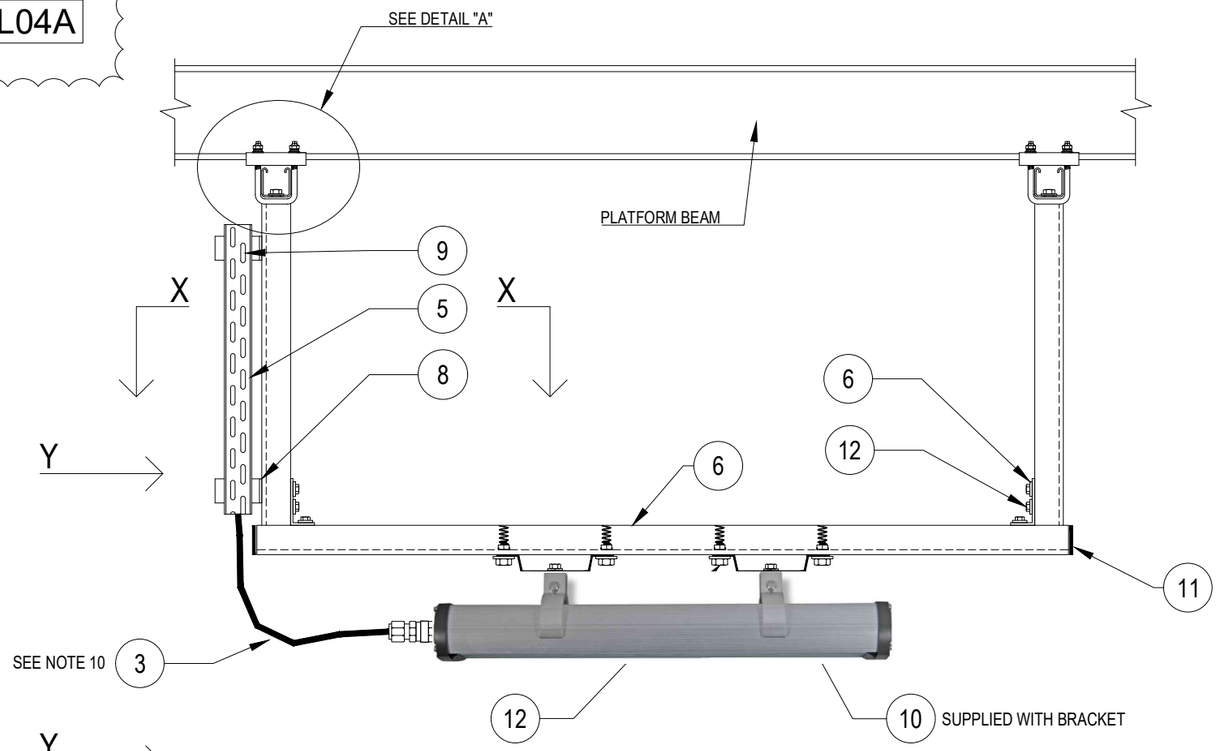
SHEET 014

REV. 02

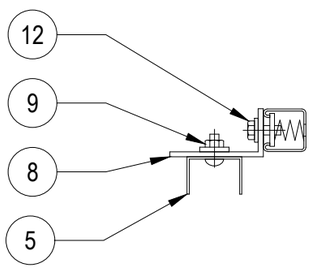
F.to UNI A3: 420mmx297mm

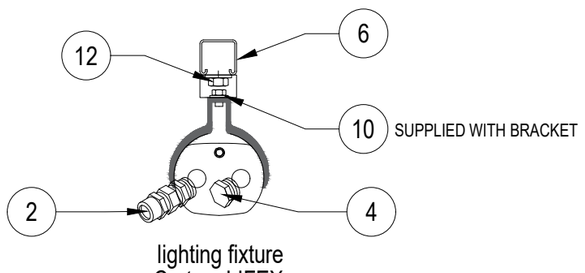
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L04A

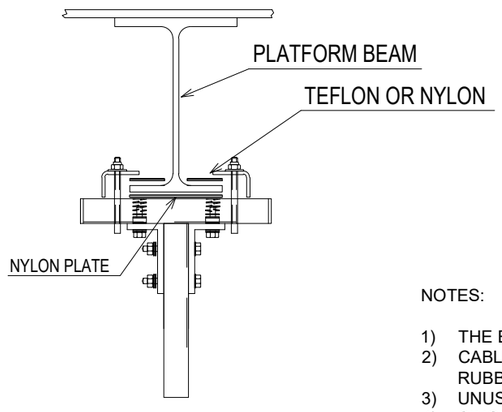


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	LIGHITNG FIXTURE (Ex e) WITH LED LAMP	ALUMINIUM ALLOY		1	
2	CABLE GLAND (Ex) FOR ARMOURED/UNARMOURED CABLE	NICK.PL.BRASS		1	NOTE 2 NOTE 5
3	ARMOURED/UNARMOURED CABLE				NOTE 5
4	PLUG	NICK.PL.BRASS		AS REQ.	NOTE 3
5	CABLE LADDER OR PERFORATED TRAY	AISI 316L		AS REQ.	
6	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2	AS REQ.	
7	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE	AISI 316L		2	NOTE 4
8	PLATE FOR ORTHOGONAL-TRASVERSAL CONNECTION (3 HOLES)	LPDE		4	
9	ROUND HEAD SCREW WITH SQUARE NECK COMPLETE WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L			
10	HEX. BOLT M8X16 WITH LARGE PLANE WASHER	AISI 316L		2	
11	PLUG FOR U-CHANNEL	LPDE		2	
12	HEX. BOLT M10X30 WITH PLANE WASHER, NUT FOR U-CHANNEL AND SPRING	AISI 316L		2	

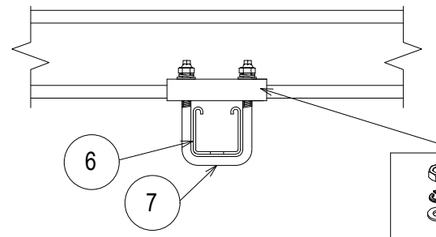




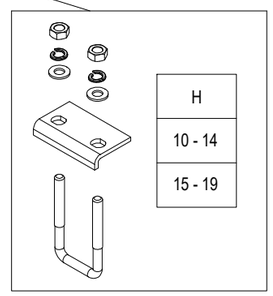
02



DETAIL "A"



VIEW "A"



NOTES:

1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY PHASE.
2) CABLE GLAND COMPLETE WITH LOCKNUT, NYLON WASHER, SERRATED WASHER, EXTERNAL RUBBER RING AND EARTH TAG (IF NECESSARY).
3) UNUSED CABLE ENTRIES MUST BE CLOSED WITH NICKEL PLATED BRASS PLUG.
4) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.
5) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–LIGHTING SYSTEM
FIXTURE SUSPENSION MOUNTED WITH U–CHANNEL SUPP.

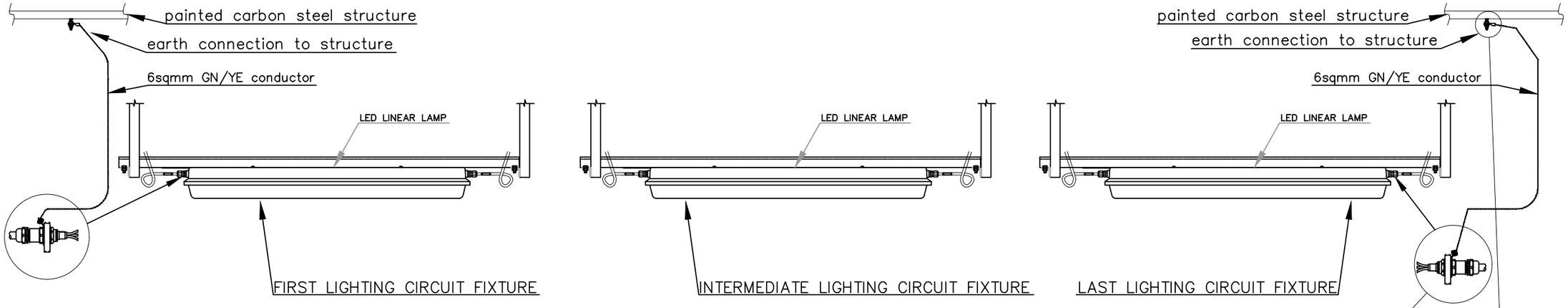
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20091 | SHEET 006 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

E32

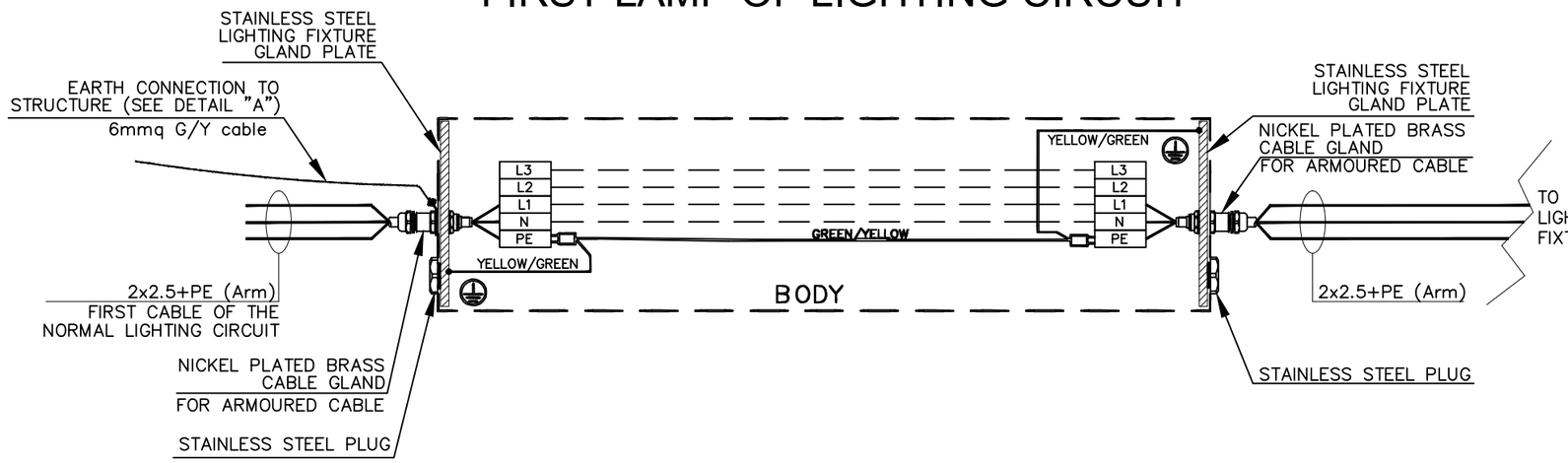


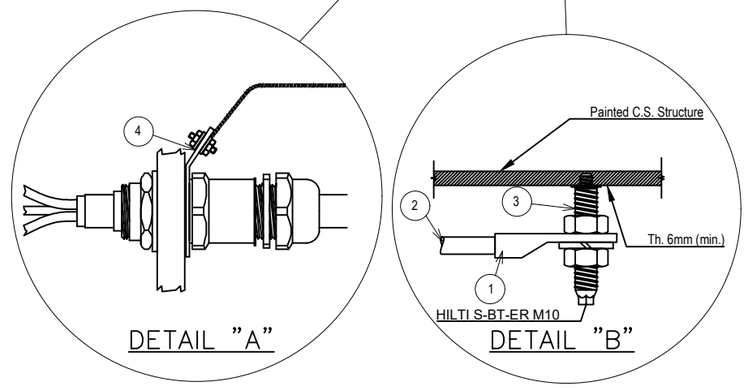
ONLY the first and the last lighting fixture of all circuits are connected to earthing system. The earthing continuity of the intermediate lighting fixtures of the circuits is guaranteed by the using of the first and the last lighting fixture earthing connection which is permanently connected to the earthing system as per the typical below.

Refer also to TYP. "E05" for Lighting Fixtures.

NORMAL LIGHTING CIRCUIT EARTHING CONTINUITY TYPICAL

FIRST LAMP OF LIGHTING CIRCUIT





POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			
2	Y/G INSULATING COPPER CONDUCTOR		6sqmm	ASR	
3	HILTI S-BT-ER M10/15 SN6 C/W NUTS AND GROWER	AISI 316L	M10X28		NOTE 1
4	CABLE GLAND EARTH TAG	NPB	M20		

The same logic is used for the earthing continuity of Emergency Lighting Circuits. The above typical has been done to represent the Earthing Continuity of G/Y conductors, the correct connections of all conductors in the respective Terminal Strips are shown in doc. AR-FEN-10-ROEC-600132 Lighting and Socket Circuit Diagrams.

NOTES:
1) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM FOR SINGLE EQUIPMENTS EARTHING CONNECTION.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING – OUTDOOR LINEAR LIGHTING FIXTURE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 023 | REV. 02

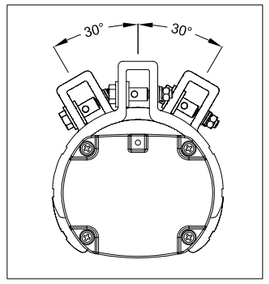
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

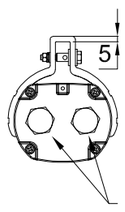
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

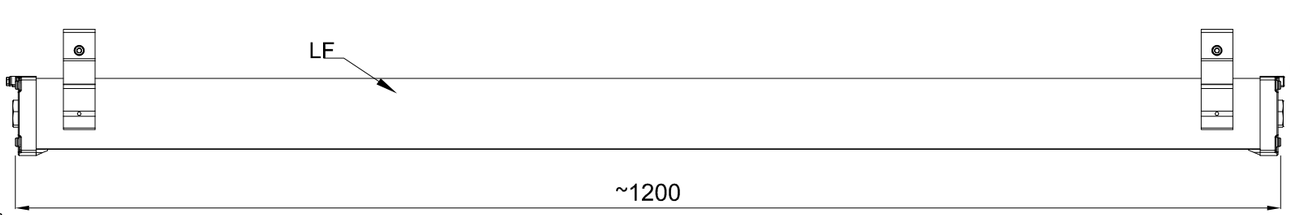
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

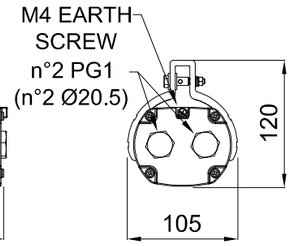


n°2 PG1
(n°2 Ø20.5)

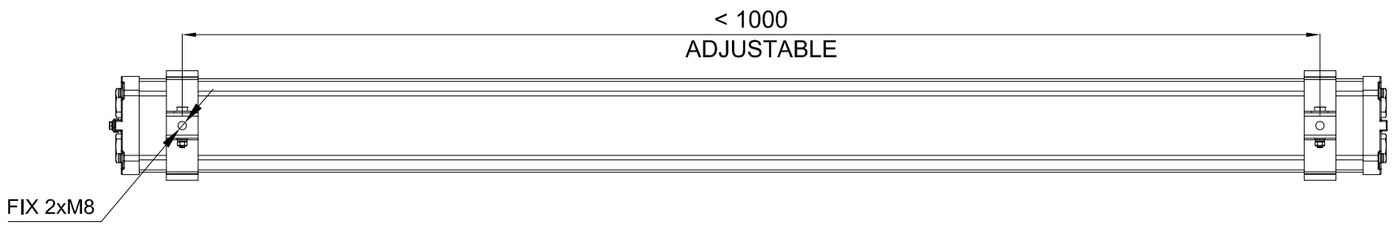
FRONT SIDE



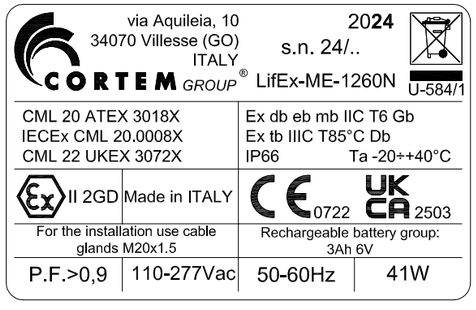
RIGHT SIDE (IN)



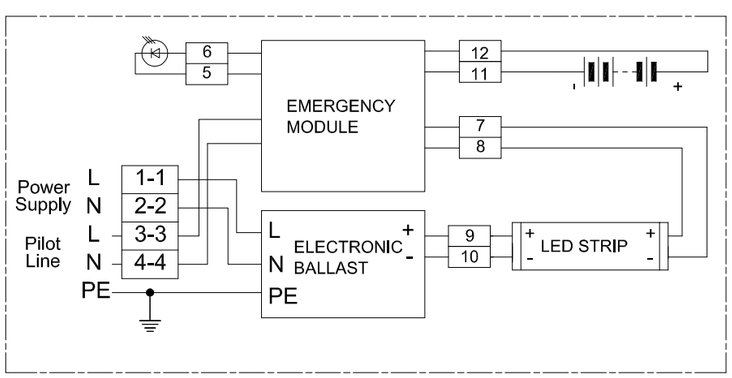
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

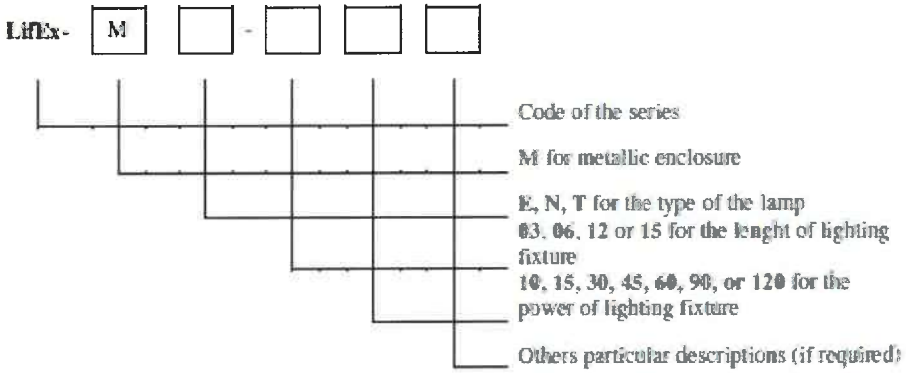
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

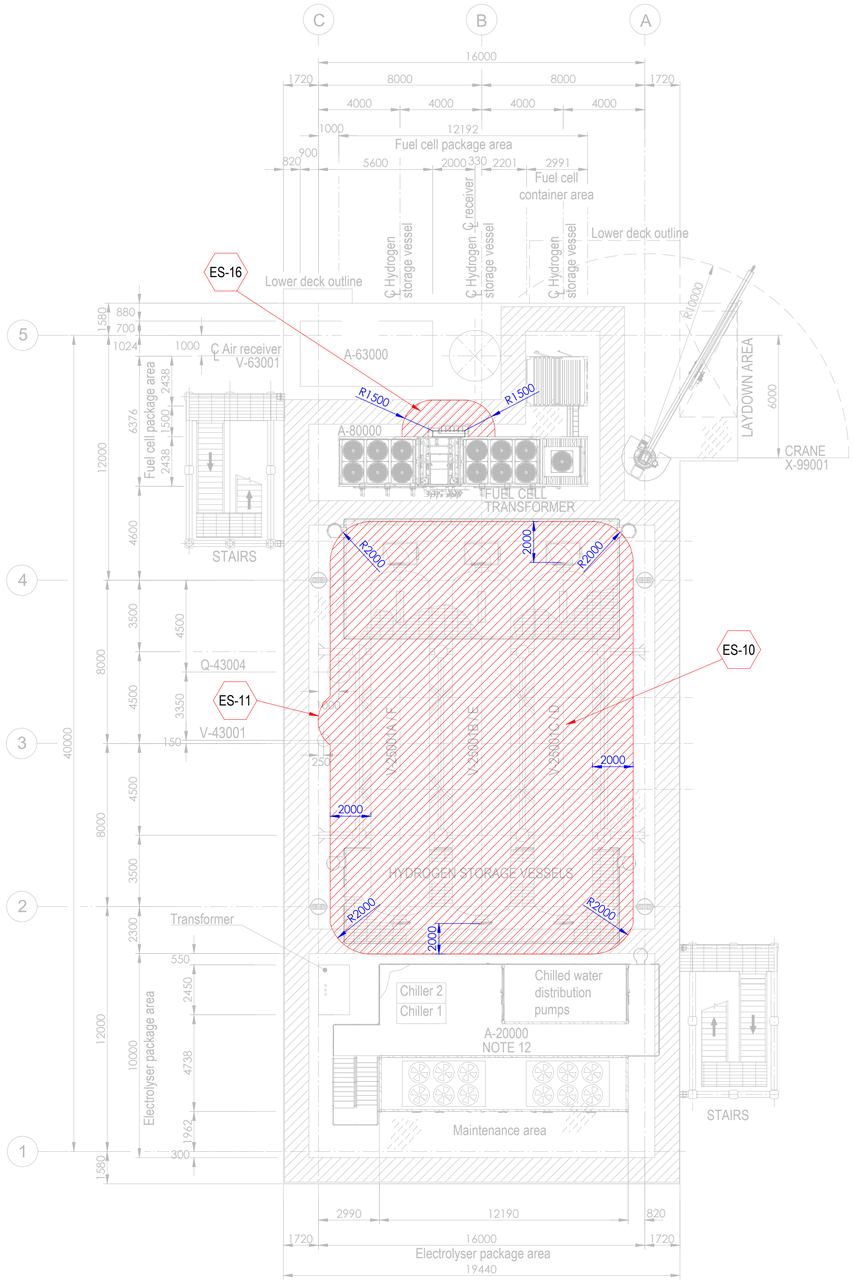
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

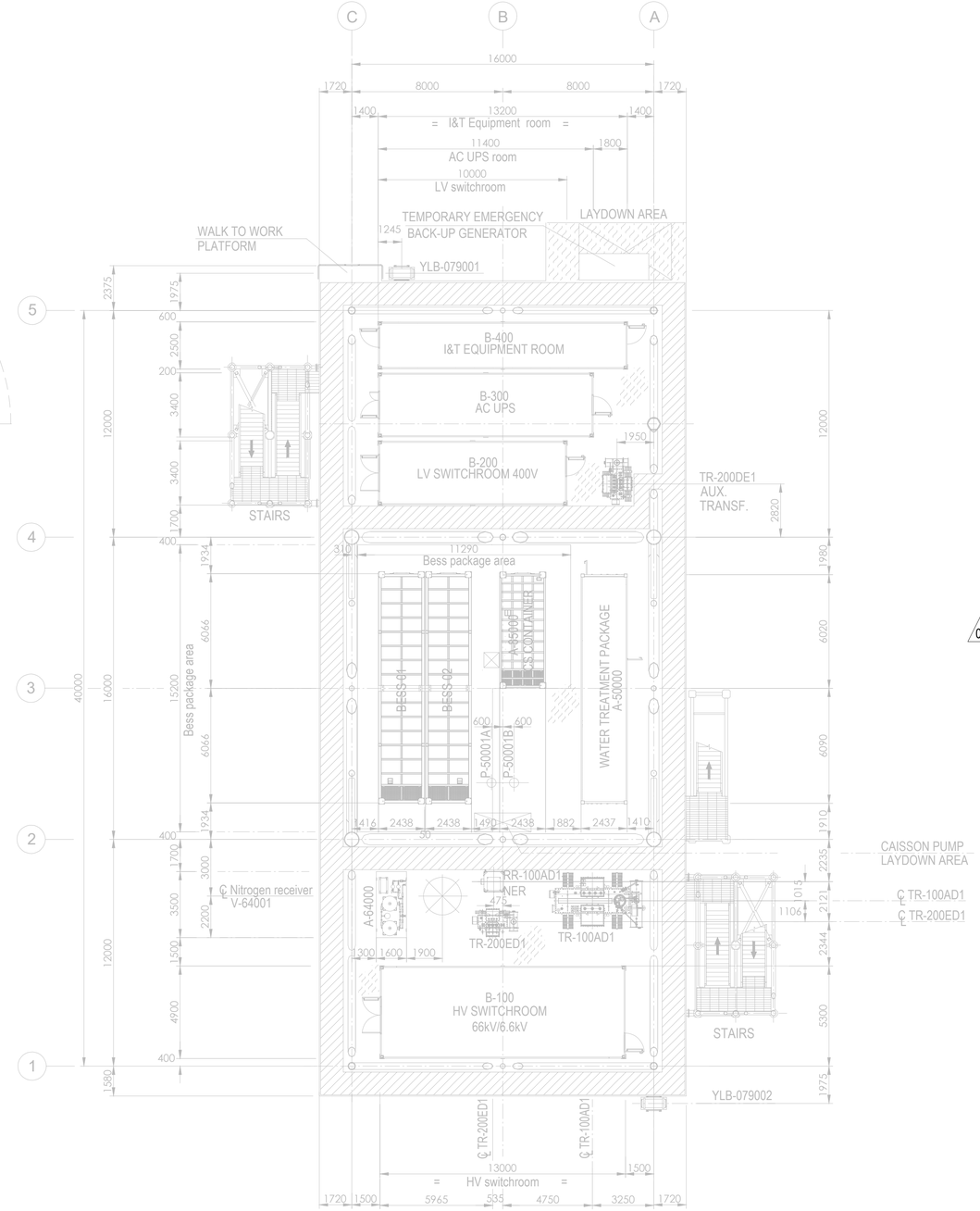
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



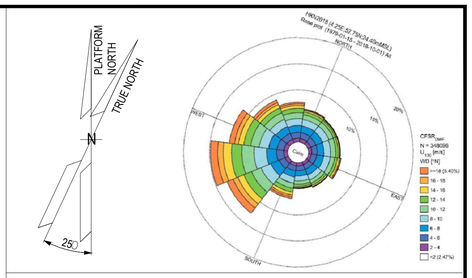
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

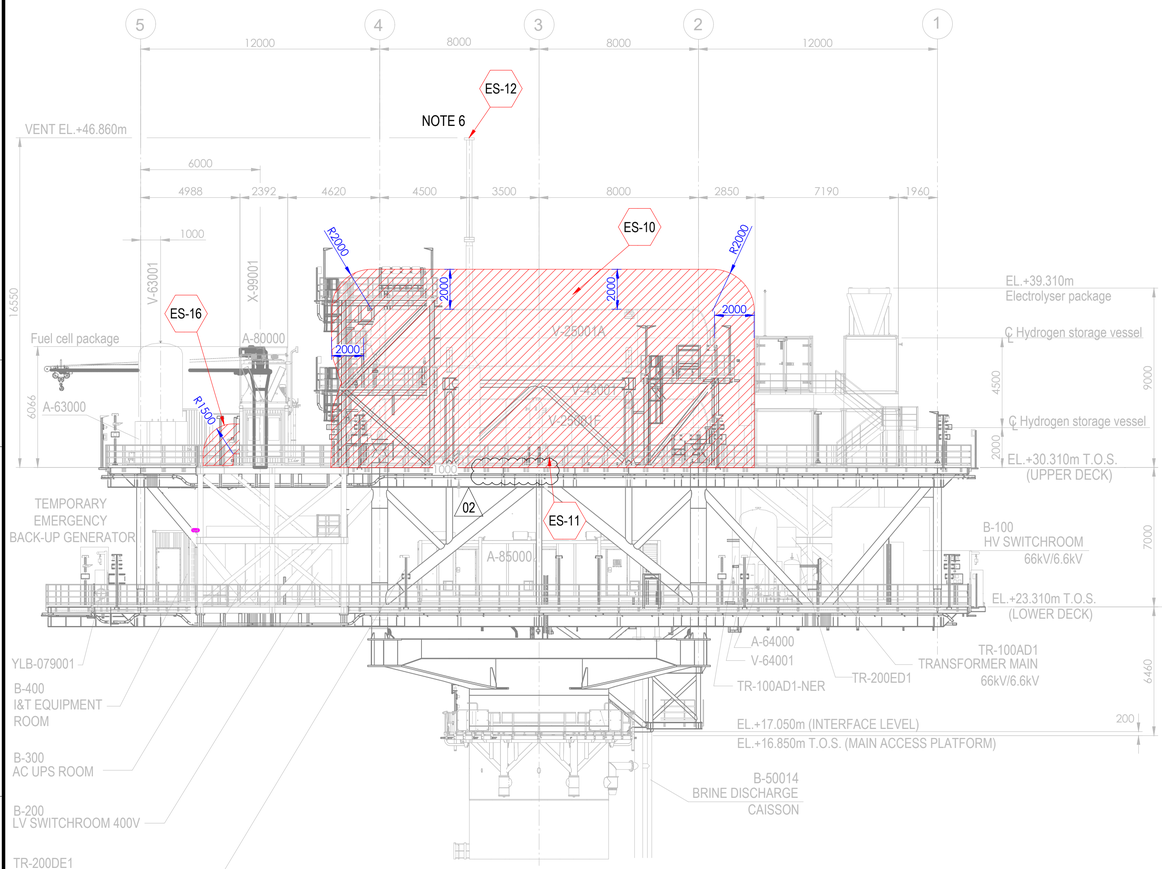
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

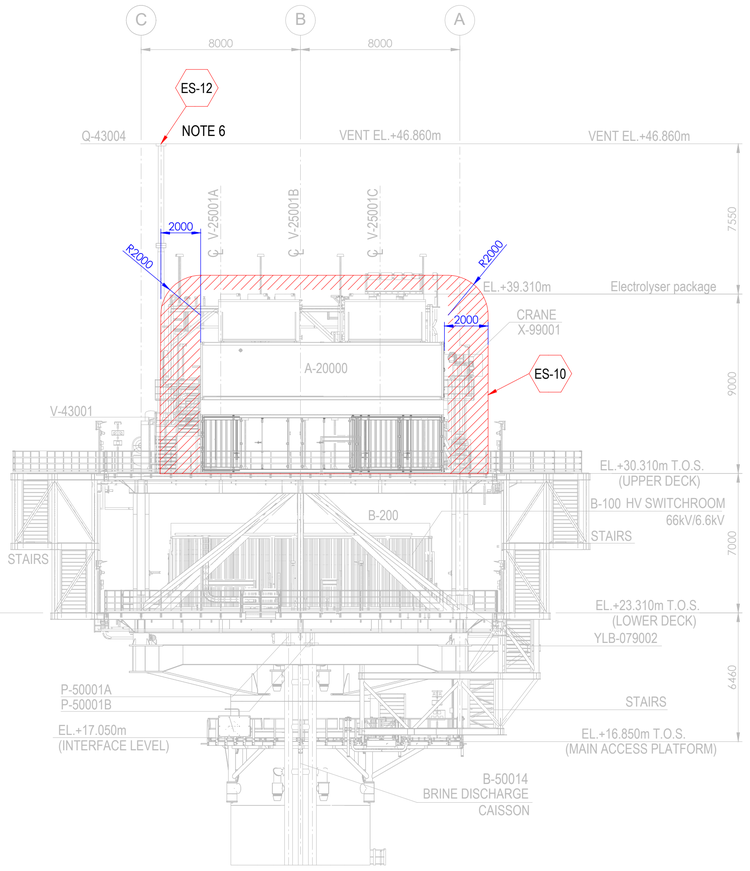
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

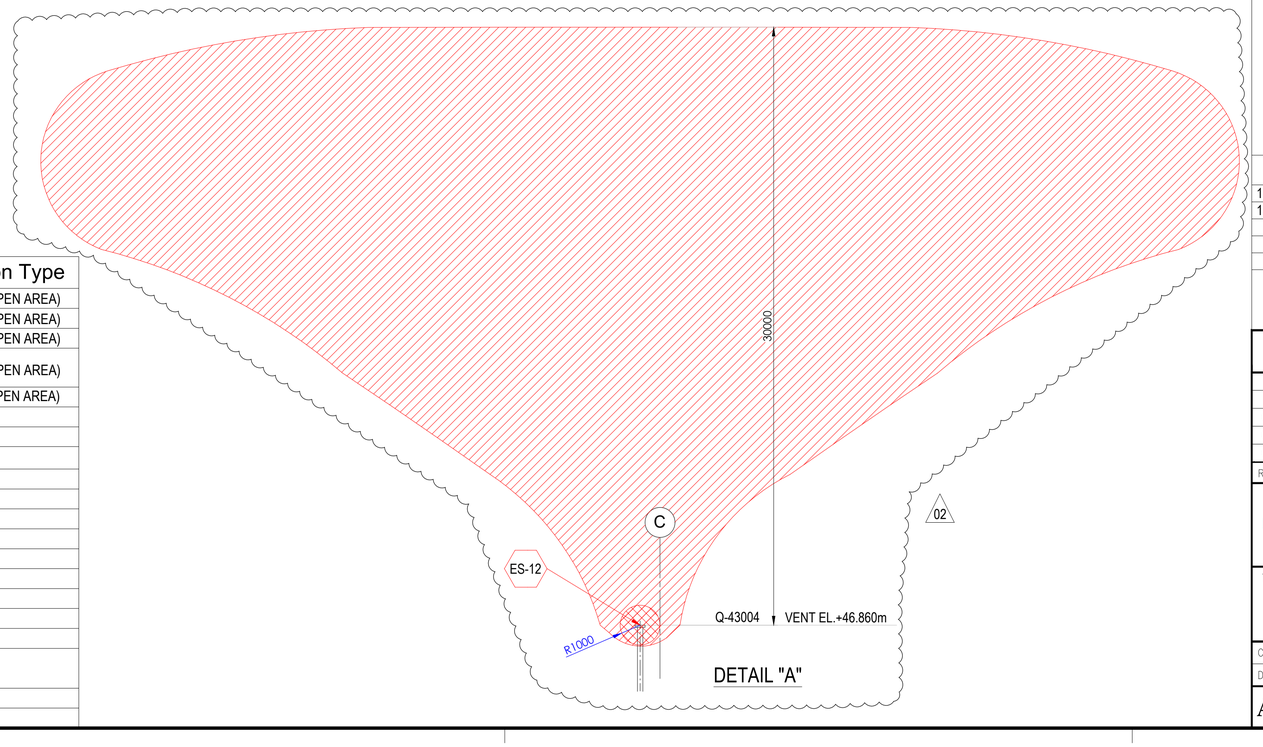


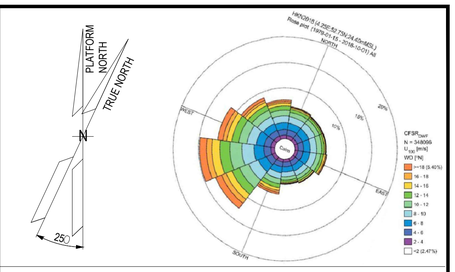
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-10	: EMERGENCY LIGHT	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001686	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db eb	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	OK	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	OK	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-10	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001686		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	See PL C30003060
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	OK	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-10	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001686		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type "nR" only)	x	NA	
71	Breathing operation is satisfactory (type "nR" only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for 'IS' Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

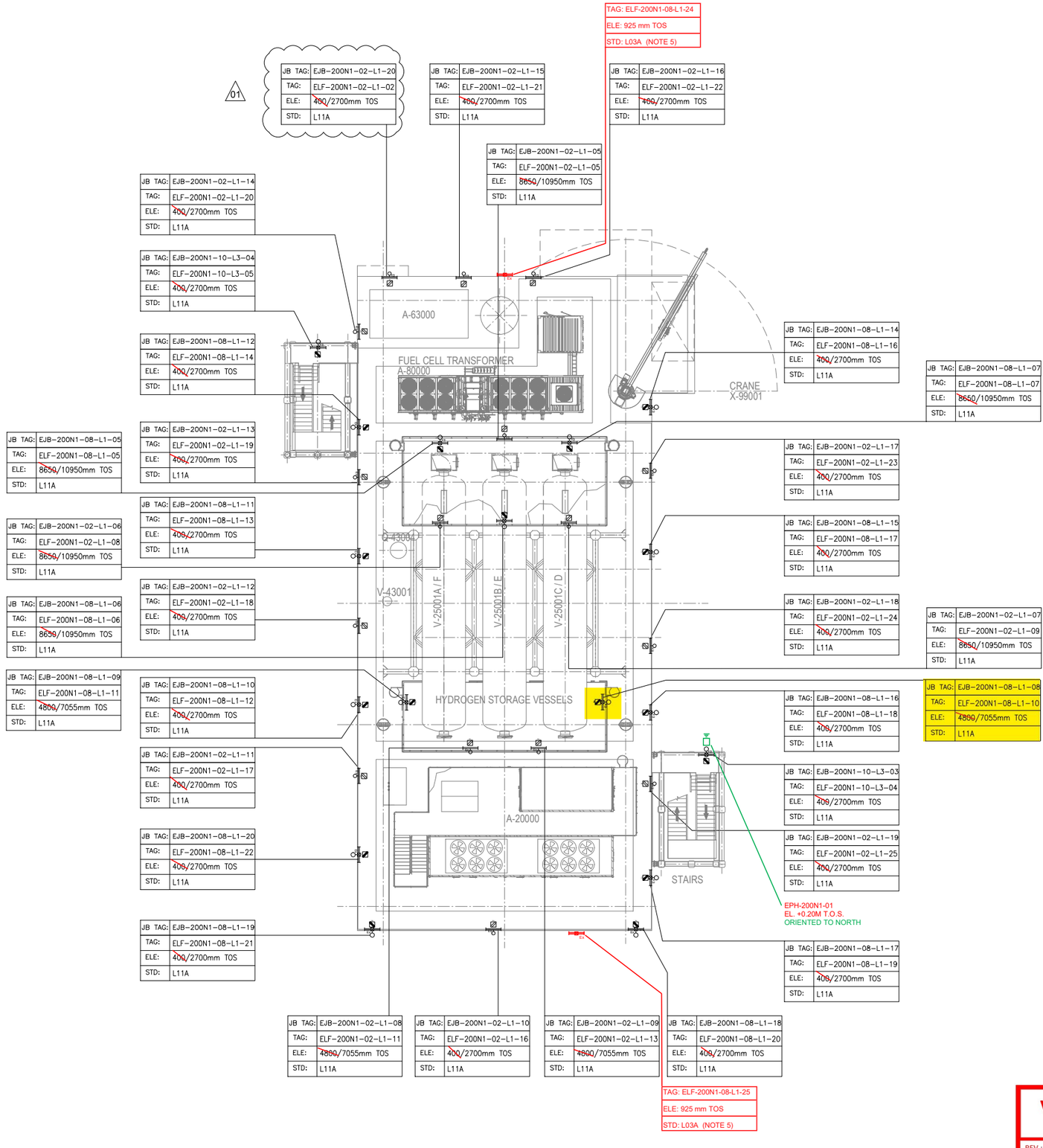
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

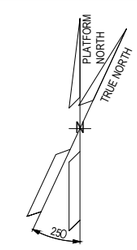
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Luca Mussi	
Date	2024-12-11	2025-01-18	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T15:29:08.306Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-18T10:21:25.560Z	

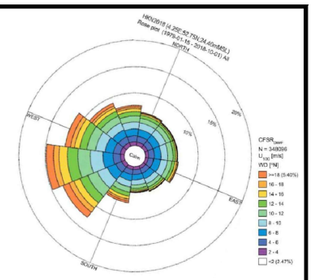
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

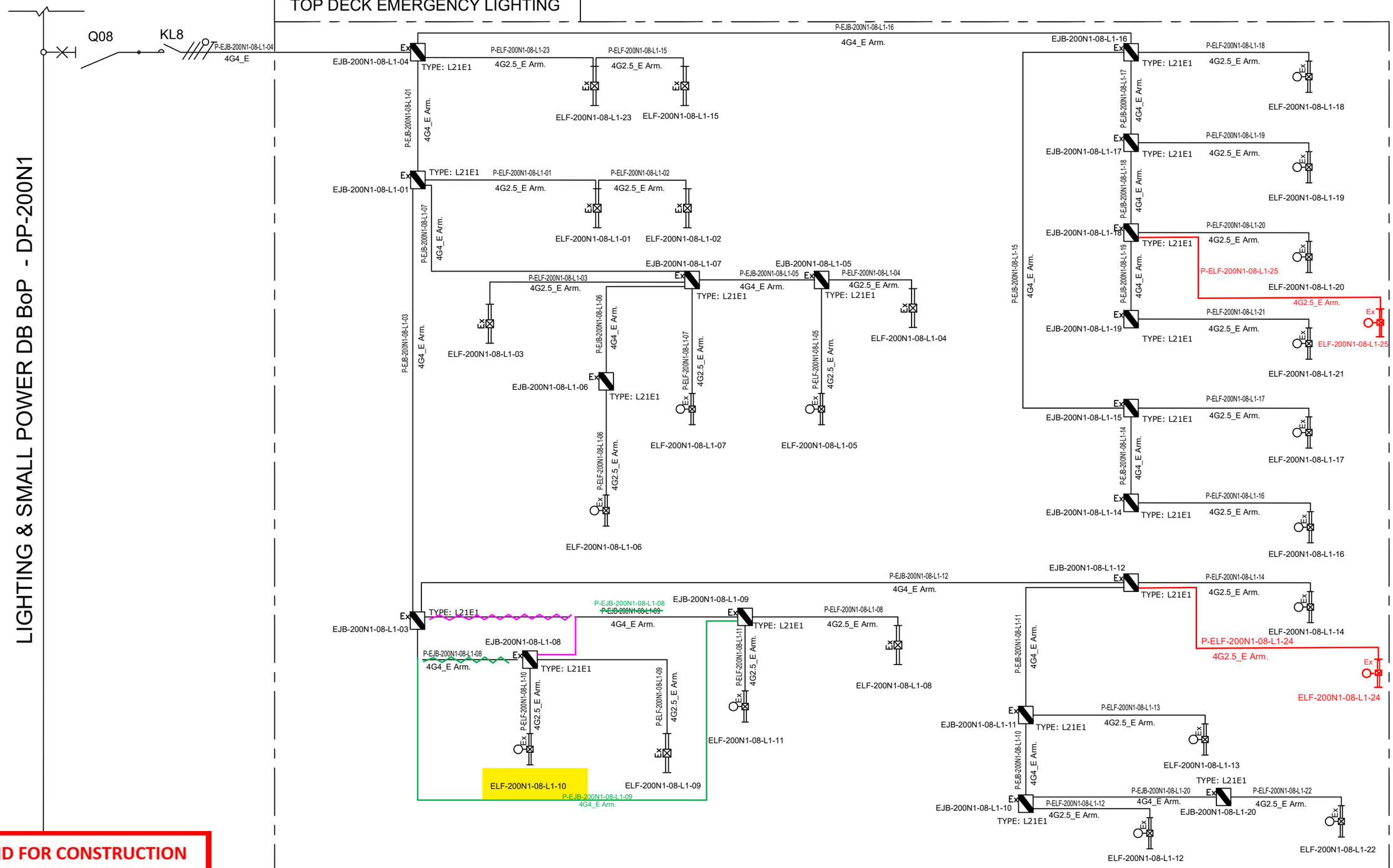
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE	01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118		SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

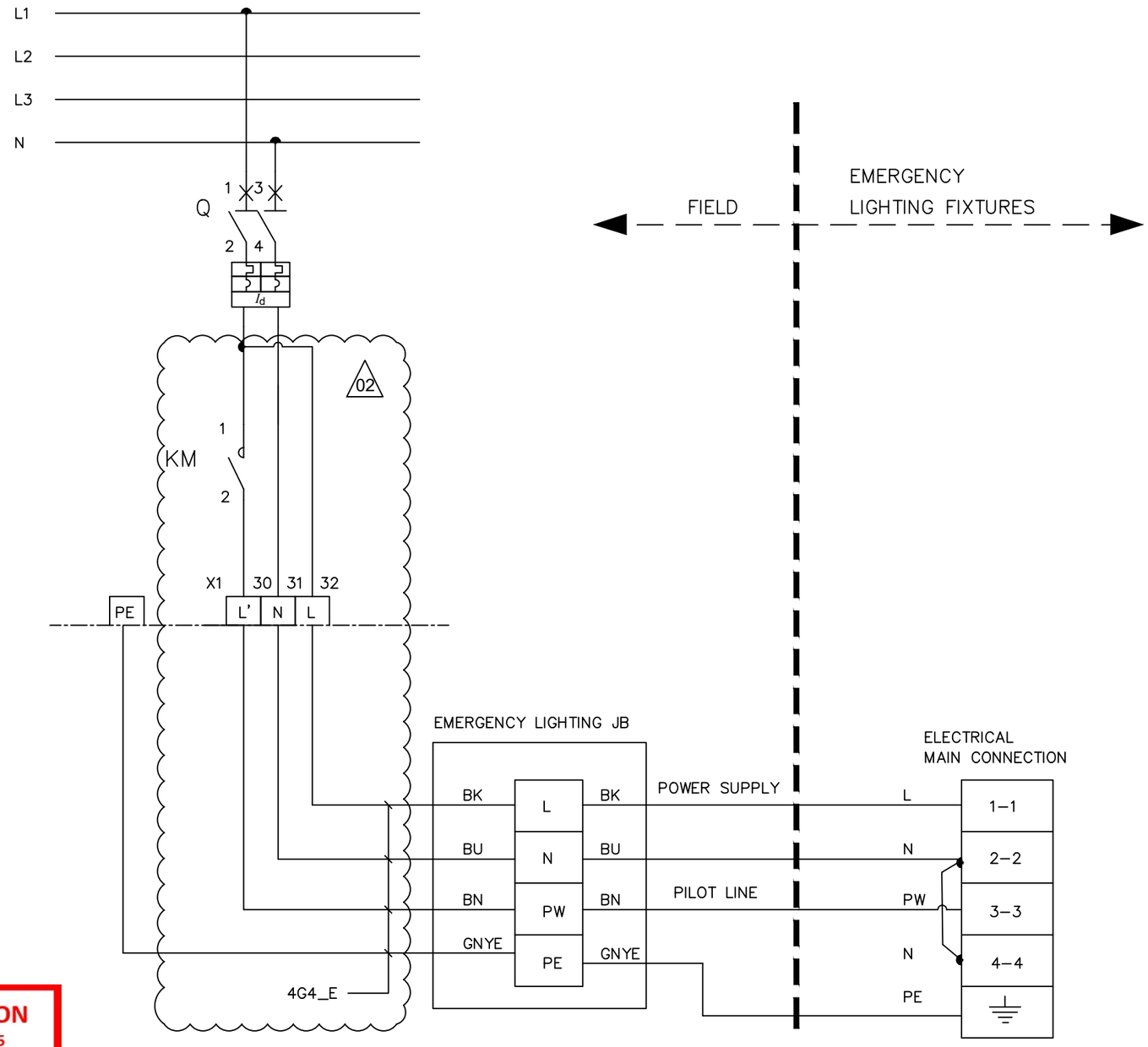
REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz



L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

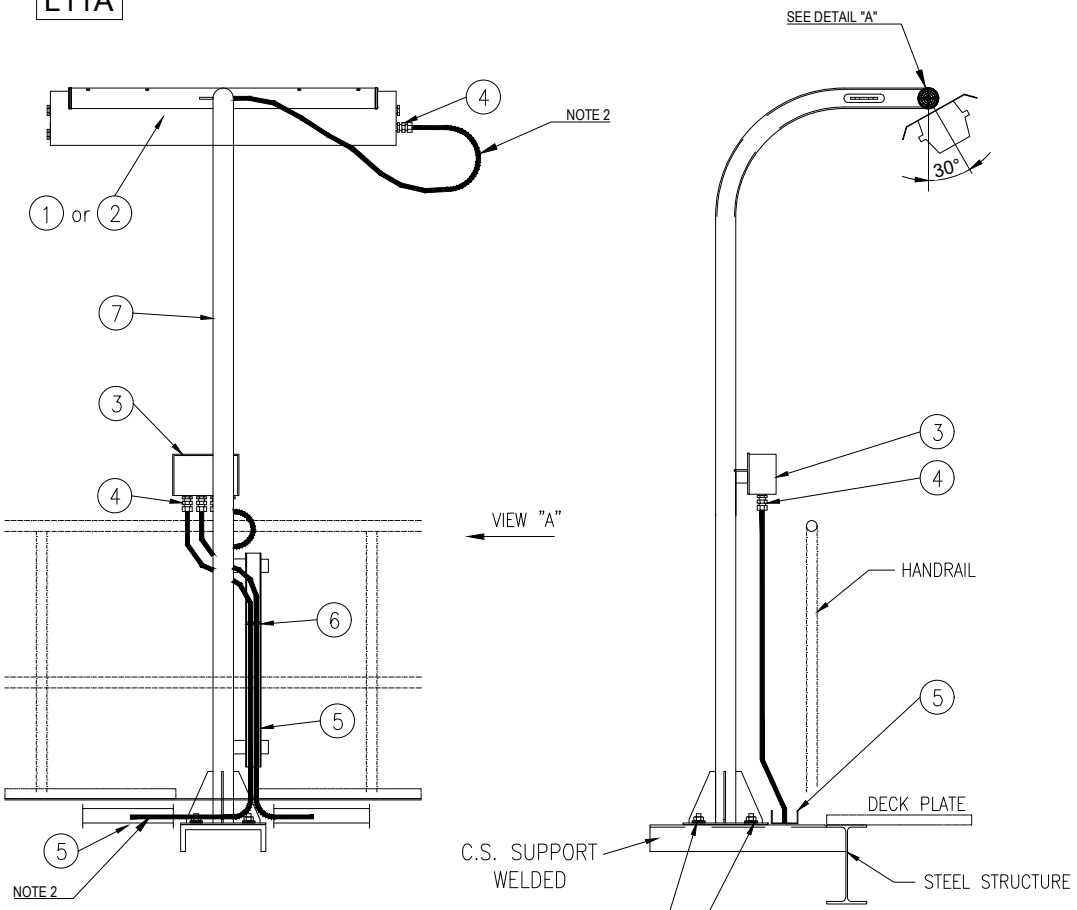
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

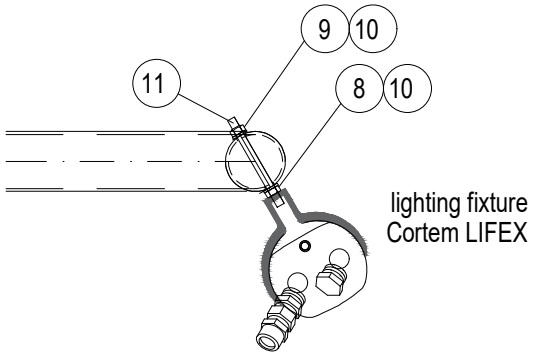
File Name : 123A90–DDL–EL–DG–20125

L11A



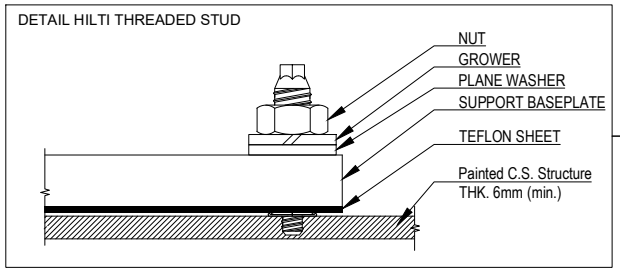
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

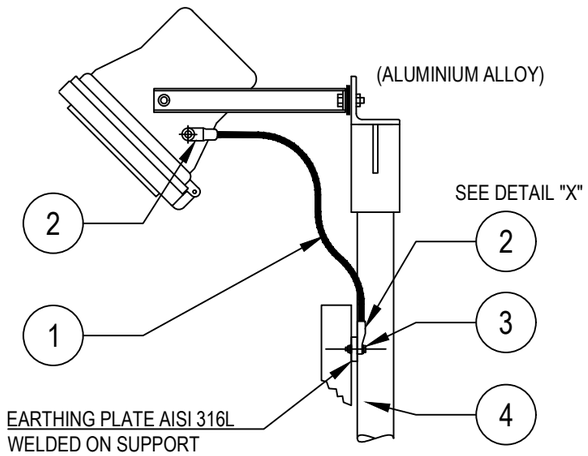
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

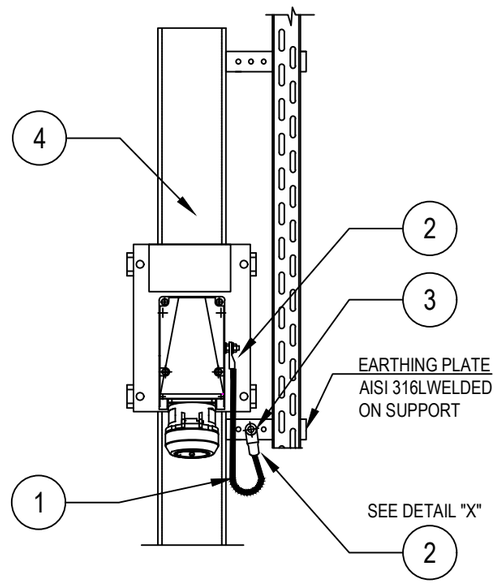
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

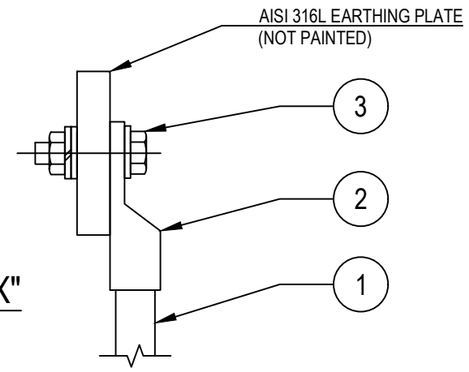
LIGHTING FIXTURE/GENERAL ITEM ON POLE



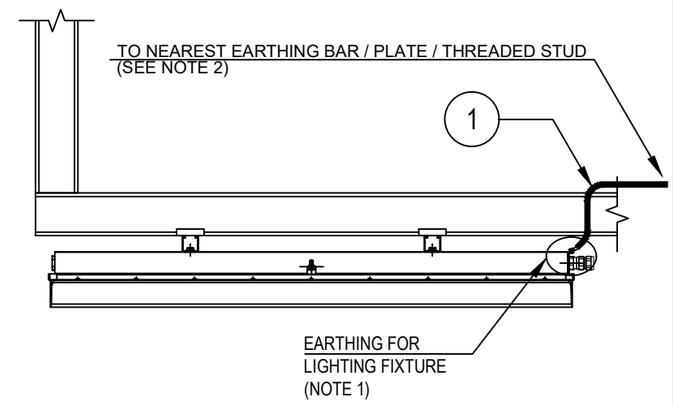
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_H	05/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

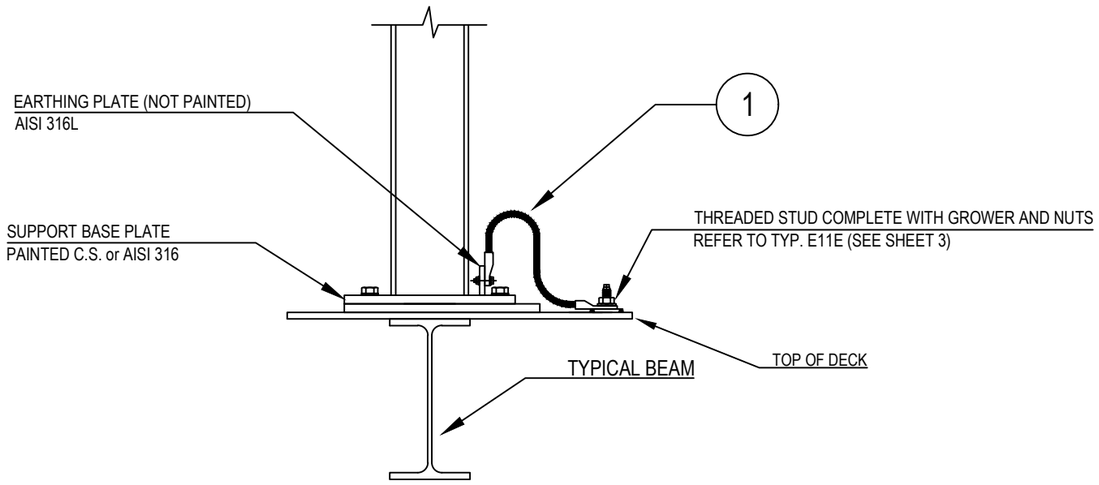
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

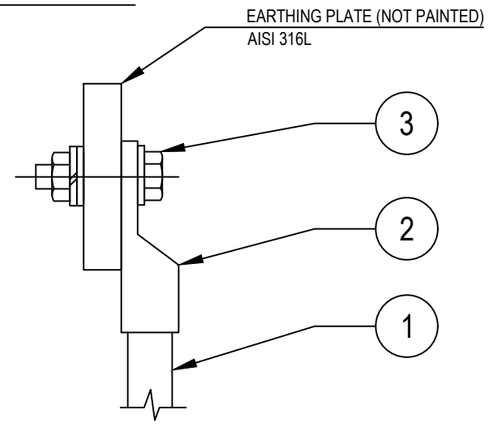
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_H	05/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

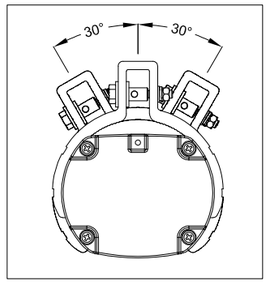
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

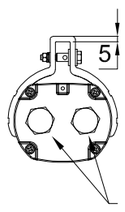
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

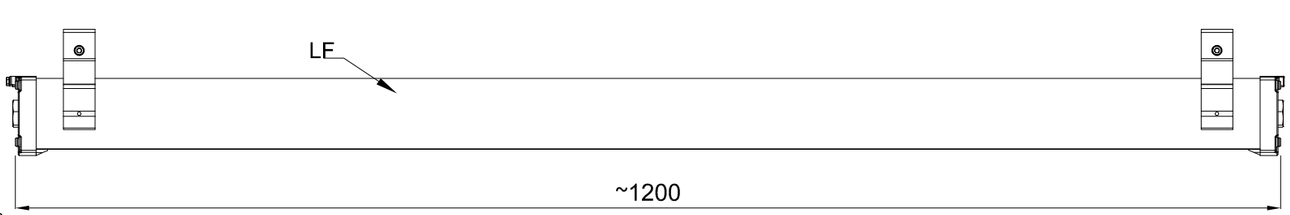
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

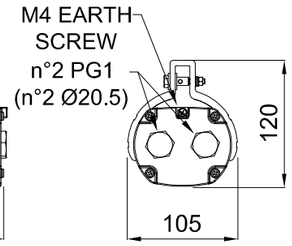


n°2 PG1
(n°2 Ø20.5)

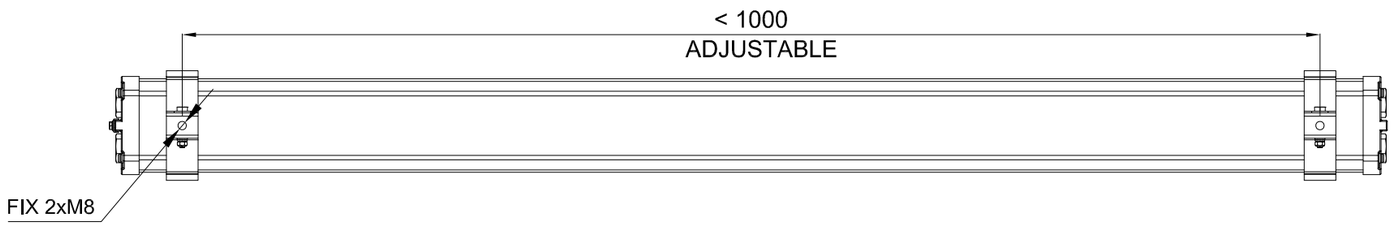
FRONT SIDE



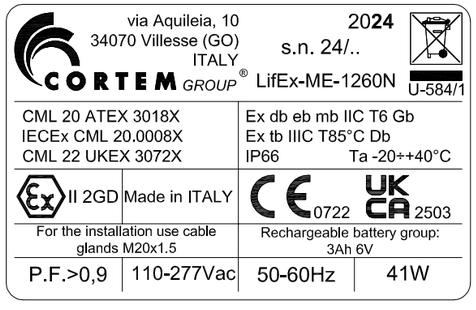
RIGHT SIDE (IN)



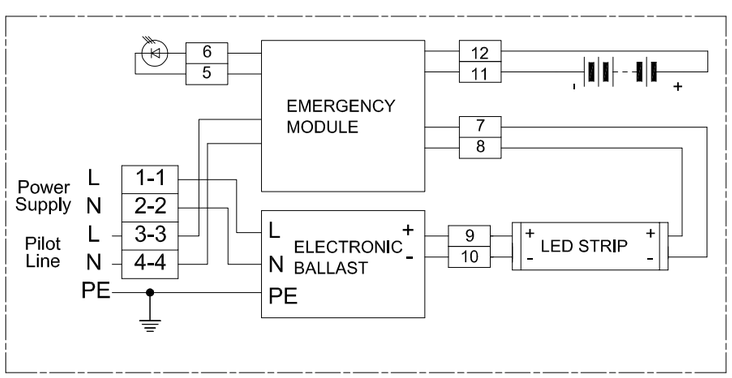
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

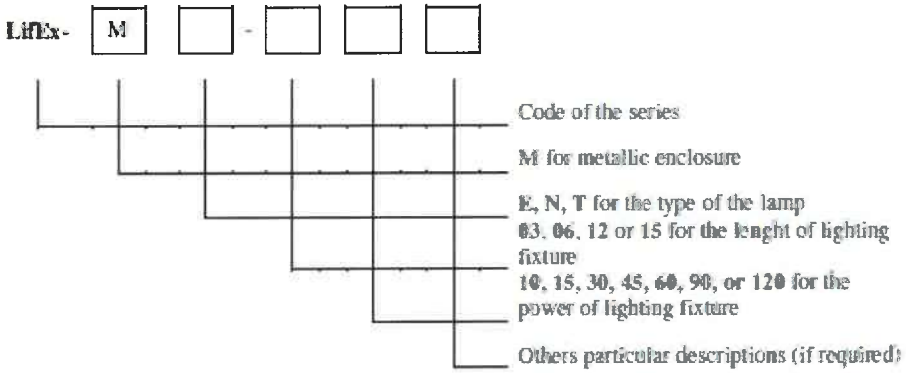
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

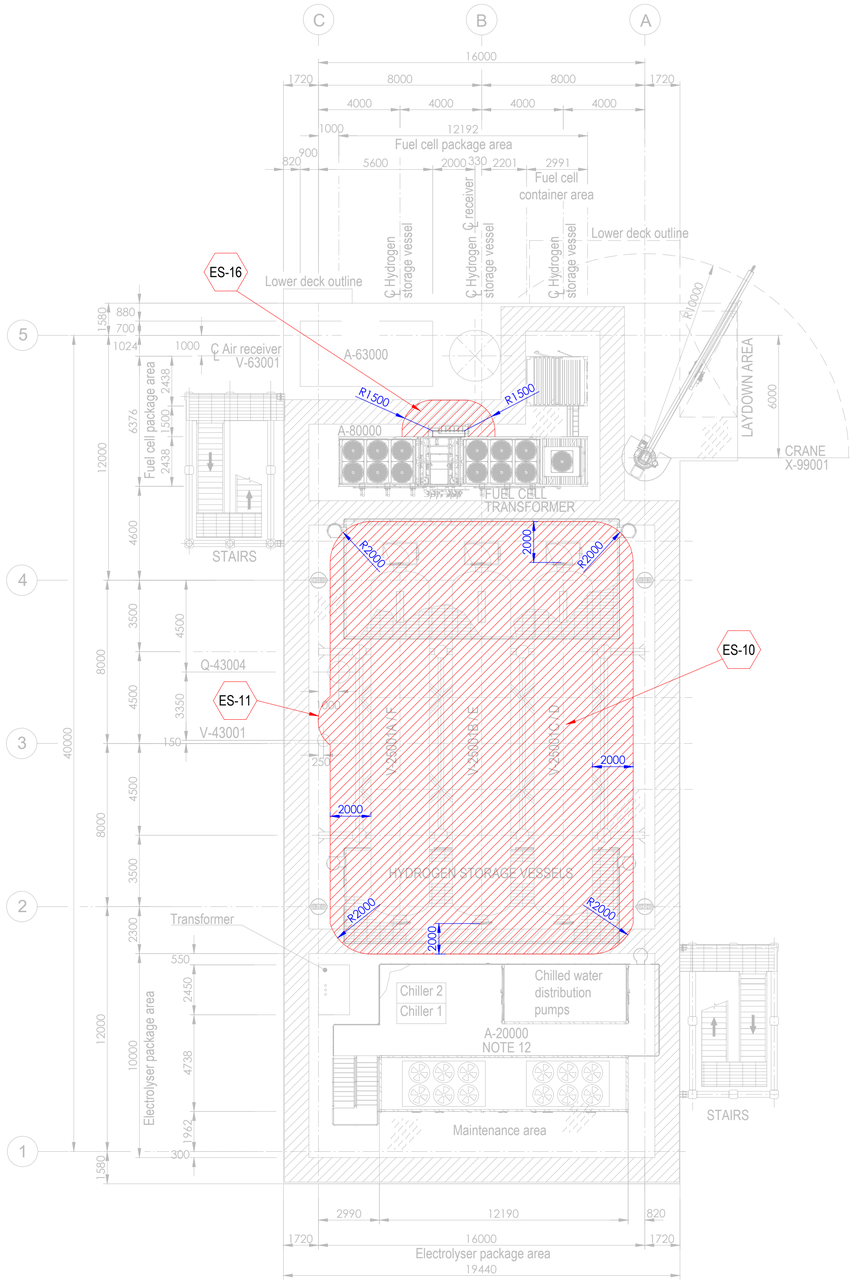
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

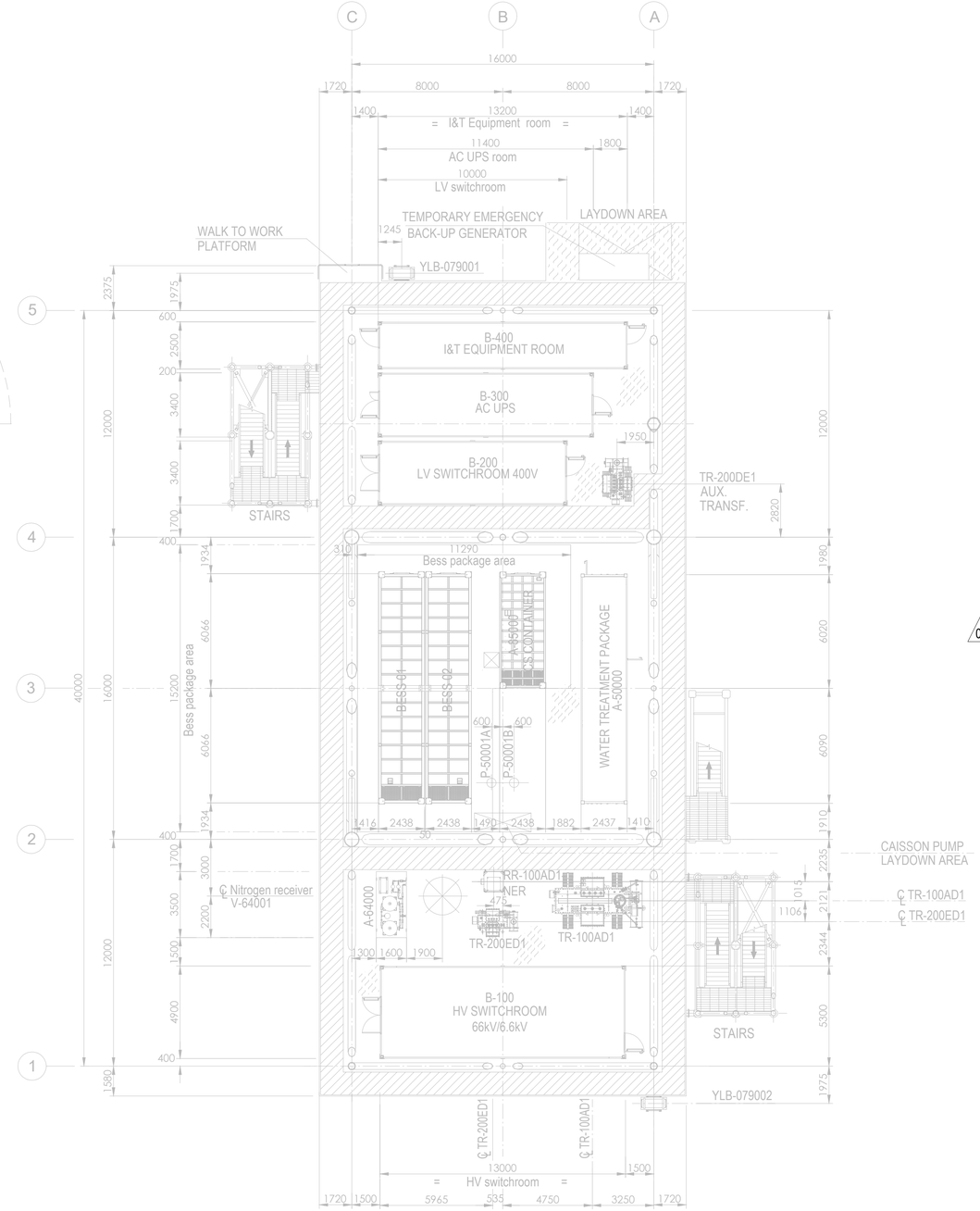
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



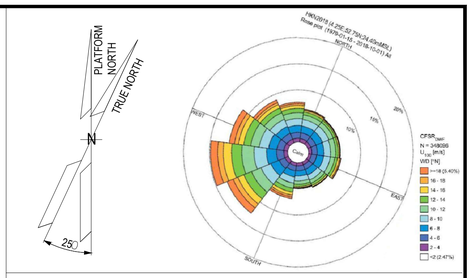
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

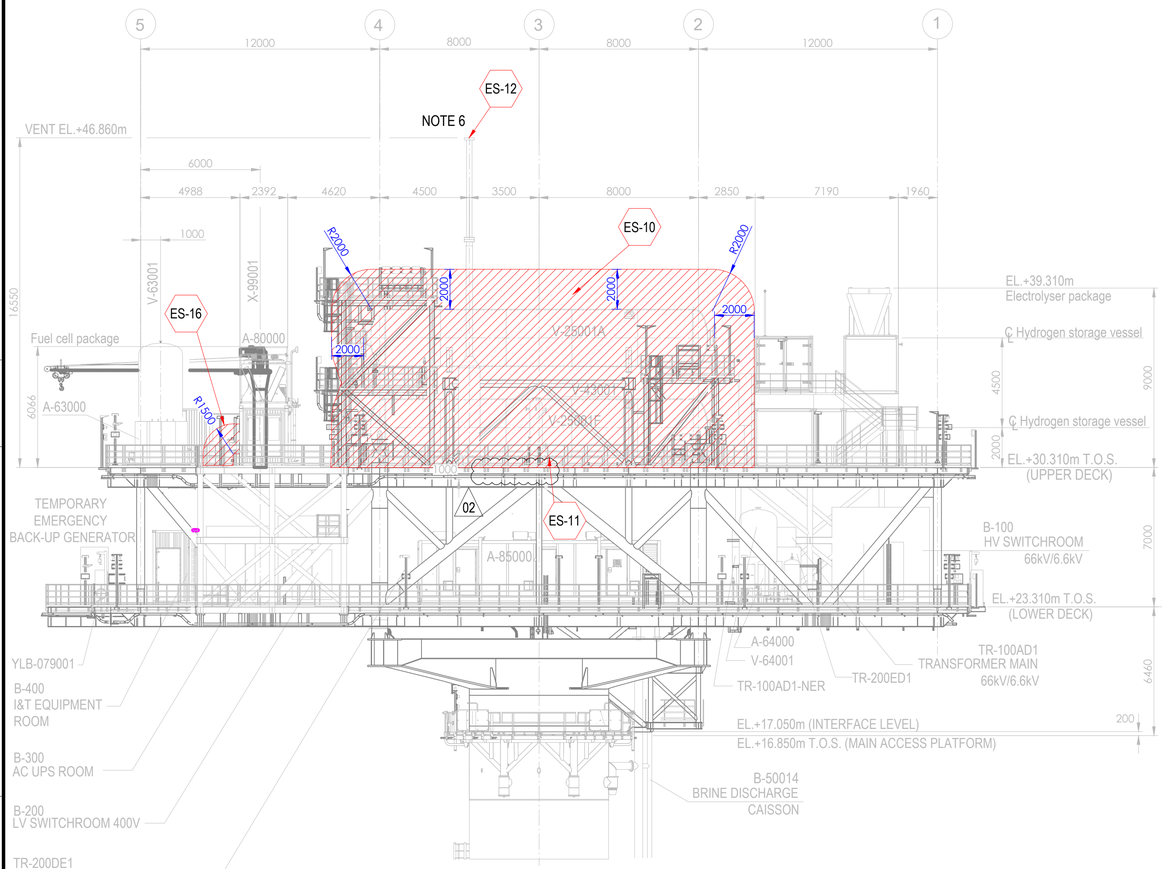
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

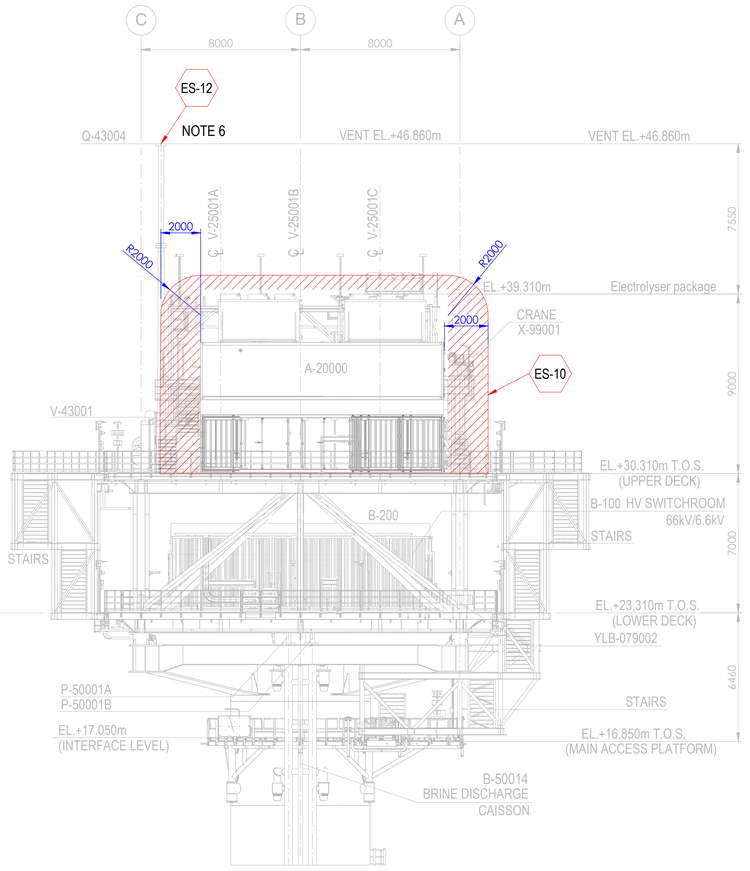
File Name : 123A90-DDL-SAF-DL-30022 Rev.02

DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

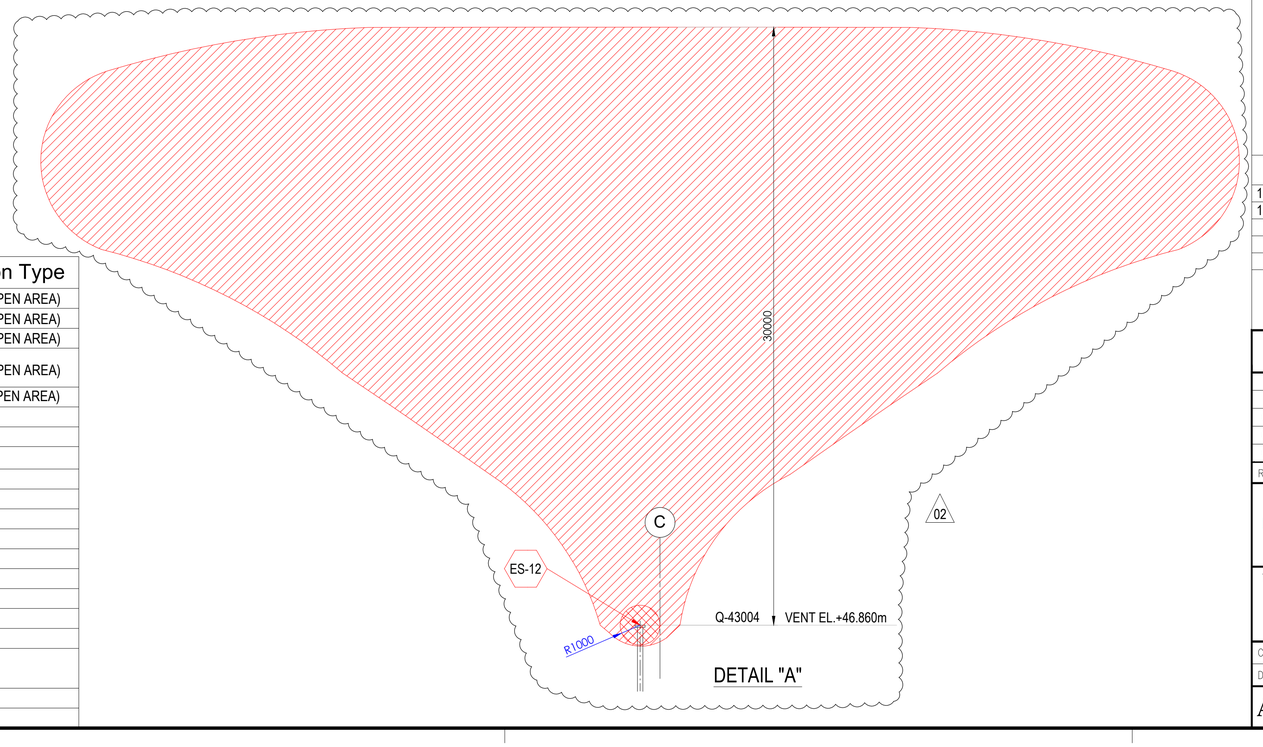


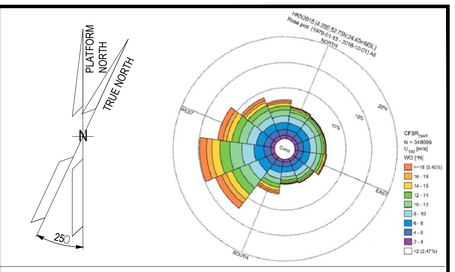
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-11 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001687	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	OK	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	OK	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-11	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001687		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-11	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001687		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

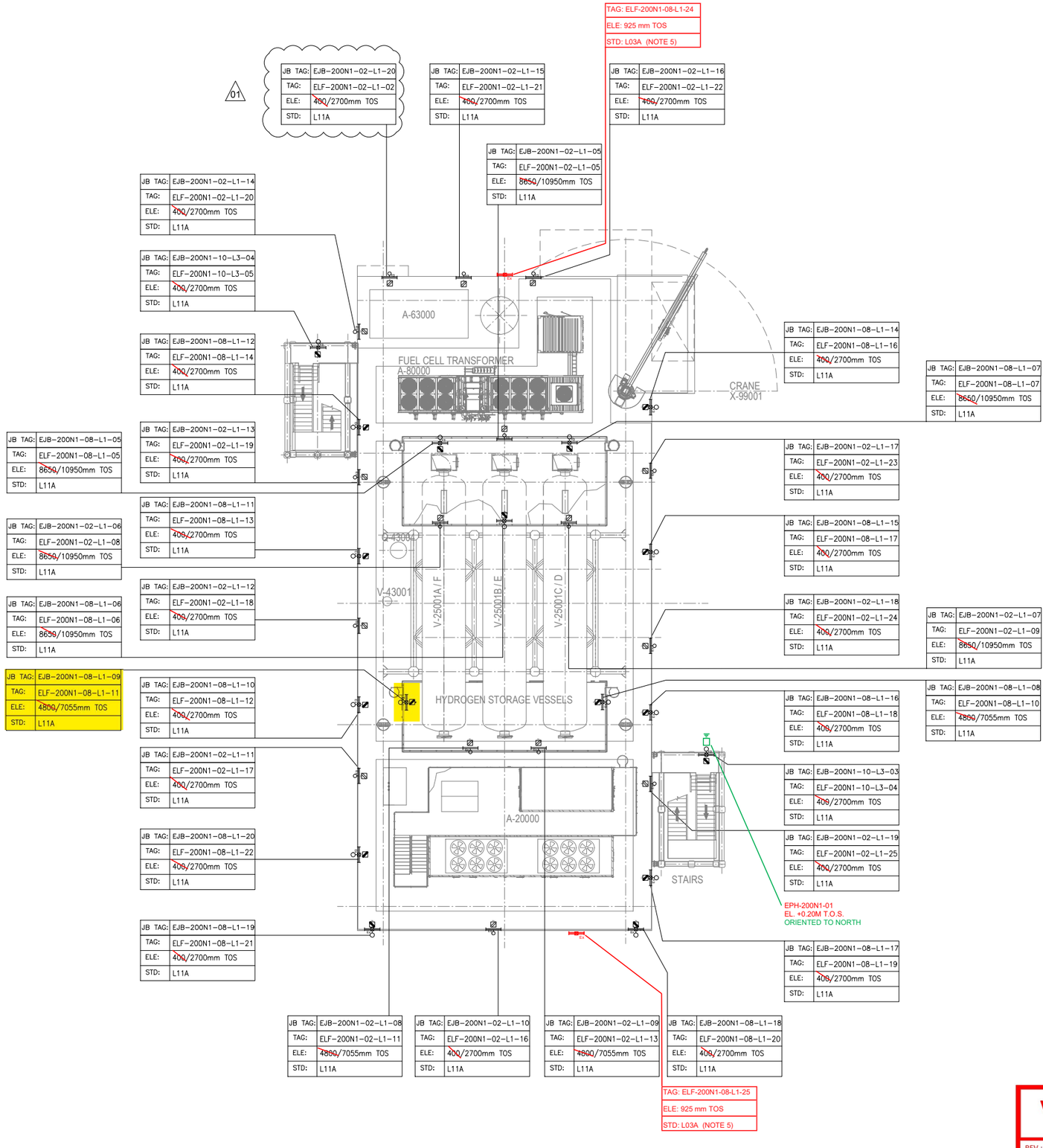
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-11	2025-01-18	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T15:29:24.076Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-18T10:03:19.670Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



JB TAG:	EJB-200N1-02-L1-20
TAG:	ELF-200N1-02-L1-02
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-15
TAG:	ELF-200N1-02-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-16
TAG:	ELF-200N1-02-L1-22
ELE:	400/2700mm TOS
STD:	L11A

TAG: ELF-200N1-08-L1-24
ELE: 925 mm TOS
STD: L03A (NOTE 5)

JB TAG:	EJB-200N1-02-L1-05
TAG:	ELF-200N1-02-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-14
TAG:	ELF-200N1-02-L1-20
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-04
TAG:	ELF-200N1-10-L3-05
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-12
TAG:	ELF-200N1-08-L1-14
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-14
TAG:	ELF-200N1-08-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-07
TAG:	ELF-200N1-08-L1-07
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-13
TAG:	ELF-200N1-02-L1-19
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-05
TAG:	ELF-200N1-08-L1-05
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-17
TAG:	ELF-200N1-02-L1-23
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-11
TAG:	ELF-200N1-08-L1-13
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-06
TAG:	ELF-200N1-02-L1-08
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-15
TAG:	ELF-200N1-08-L1-17
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-12
TAG:	ELF-200N1-02-L1-18
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-18
TAG:	ELF-200N1-02-L1-24
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-06
TAG:	ELF-200N1-08-L1-06
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-07
TAG:	ELF-200N1-02-L1-09
ELE:	8650/10950mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-09
TAG:	ELF-200N1-08-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-10
TAG:	ELF-200N1-08-L1-12
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-16
TAG:	ELF-200N1-08-L1-18
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-08
TAG:	ELF-200N1-08-L1-10
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-11
TAG:	ELF-200N1-02-L1-17
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-10-L3-03
TAG:	ELF-200N1-10-L3-04
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-20
TAG:	ELF-200N1-08-L1-22
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-19
TAG:	ELF-200N1-02-L1-25
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-19
TAG:	ELF-200N1-08-L1-21
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-17
TAG:	ELF-200N1-08-L1-19
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-08
TAG:	ELF-200N1-02-L1-11
ELE:	4800/7055mm TOS
STD:	L11A

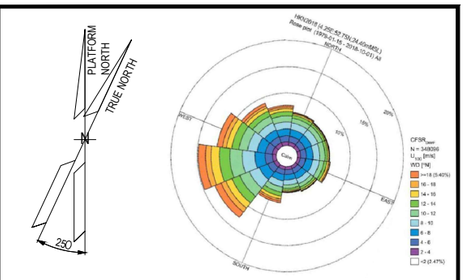
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TAG:	ELF-200N1-02-L1-16
ELE:	400/2700mm TOS
STD:	L11A

JB TAG:	EJB-200N1-02-L1-09
TAG:	ELF-200N1-02-L1-13
ELE:	4800/7055mm TOS
STD:	L11A

JB TAG:	EJB-200N1-08-L1-18
TAG:	ELF-200N1-08-L1-20
ELE:	400/2700mm TOS
STD:	L11A

TAG: ELF-200N1-08-L1-25
ELE: 925 mm TOS
STD: L03A (NOTE 5)

PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20118

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

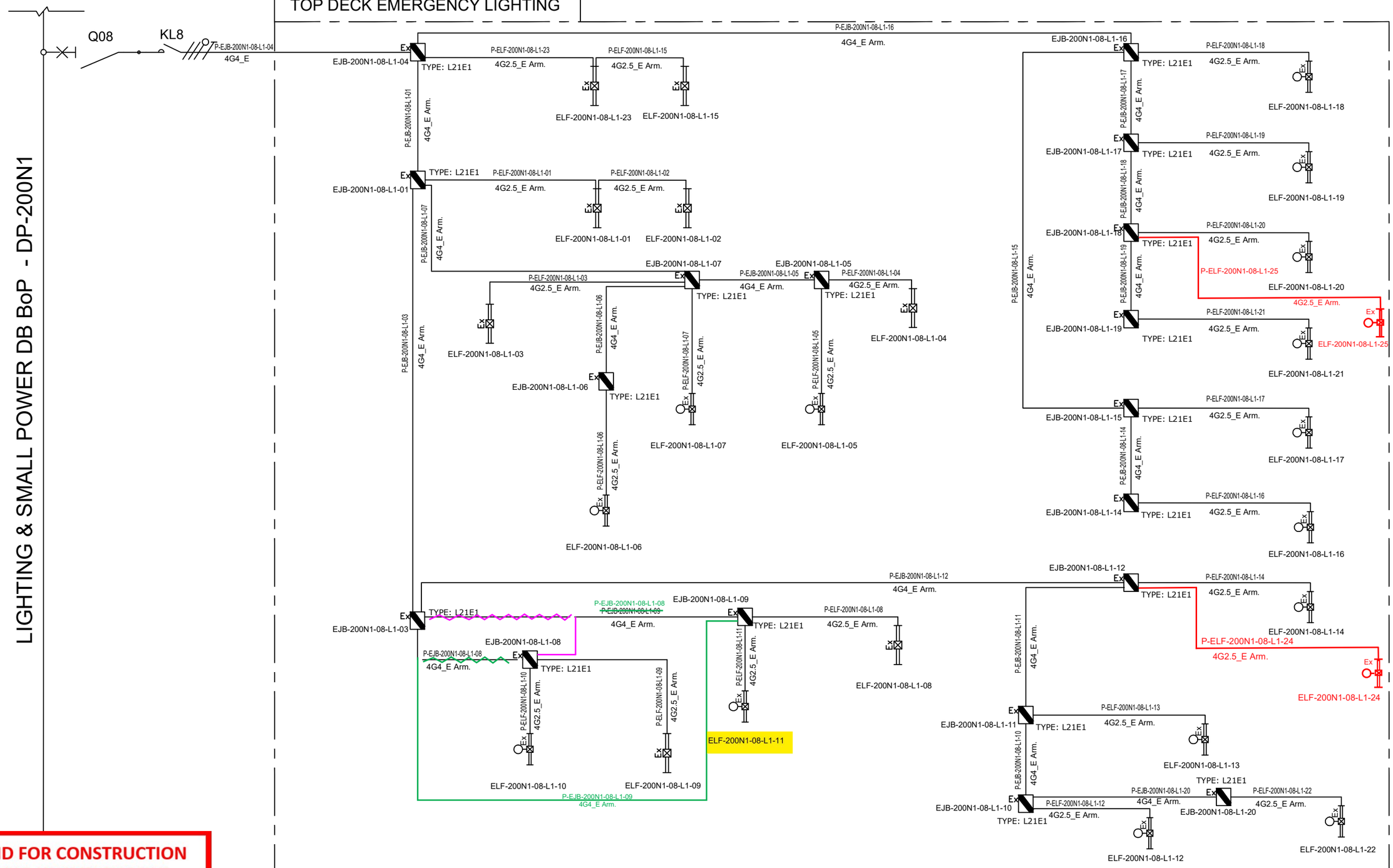
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

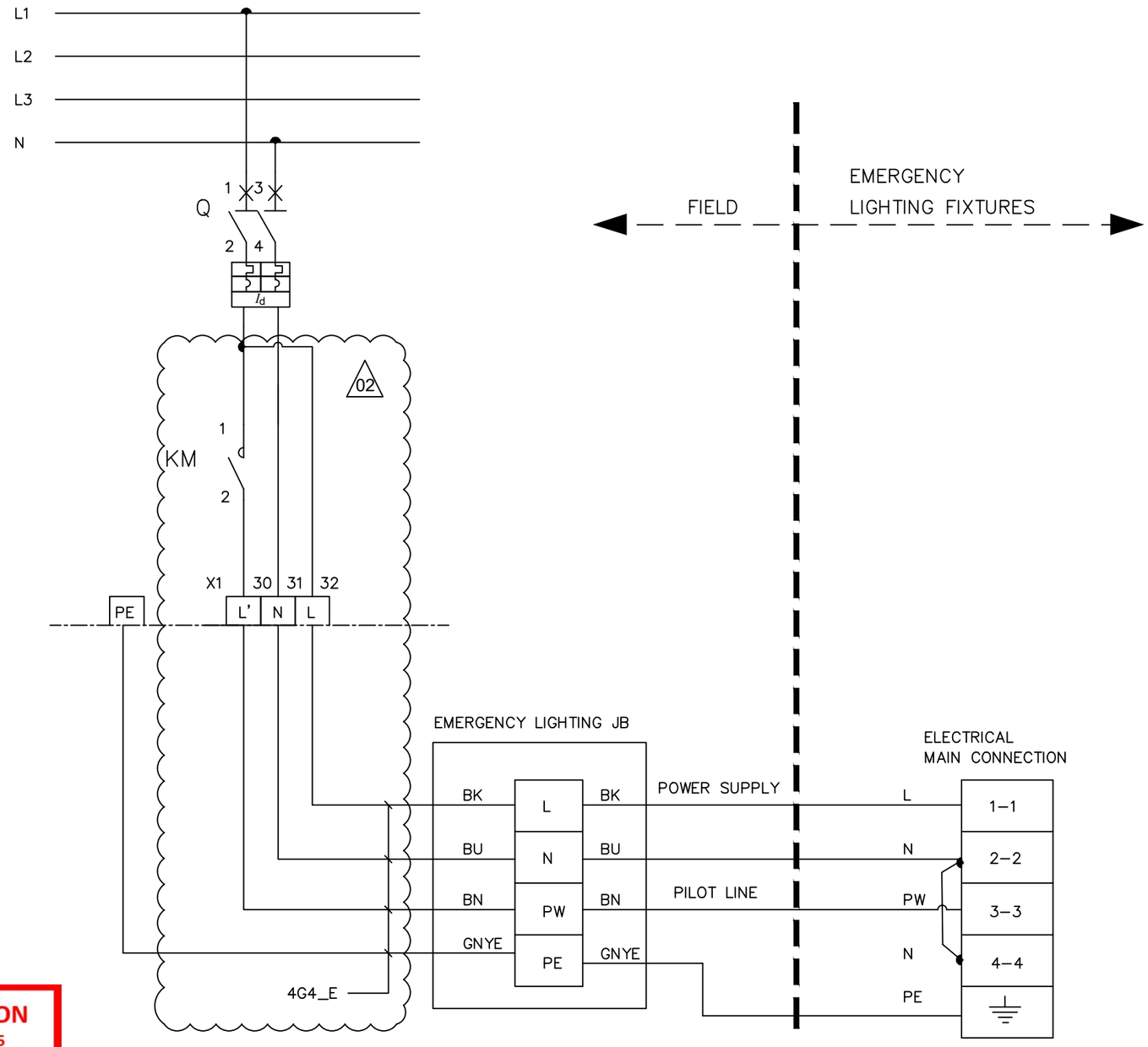
REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20125

EMERGENCY LIGHTS WIRING DIAGRAM

DP–200N1
FOR EMERGENCY LIGHTING
INTERNAL BUS BAR 400V–230V / 50Hz



L – POWER SUPPLY
N – NEUTRAL
PW – PILOT LINE
PE – PROTECTIVE EARTH
BN – BROWN (L')
BK – BLACK (L)
BU – BLUE (N)
GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

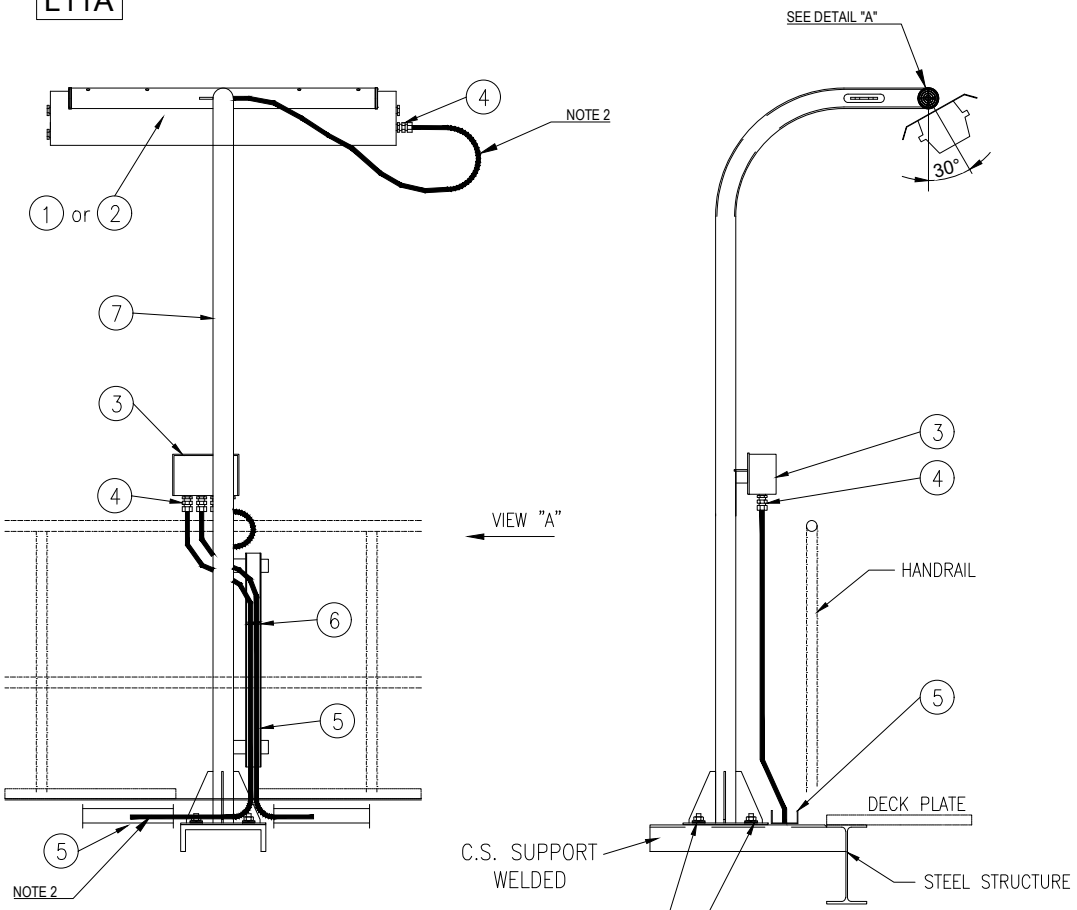
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DG–20125 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

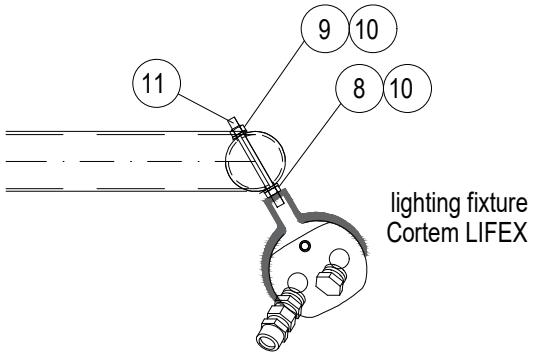
File Name : 123A90–DDL–EL–DG–20125

L11A



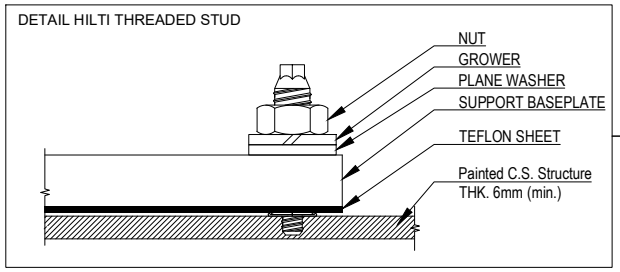
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

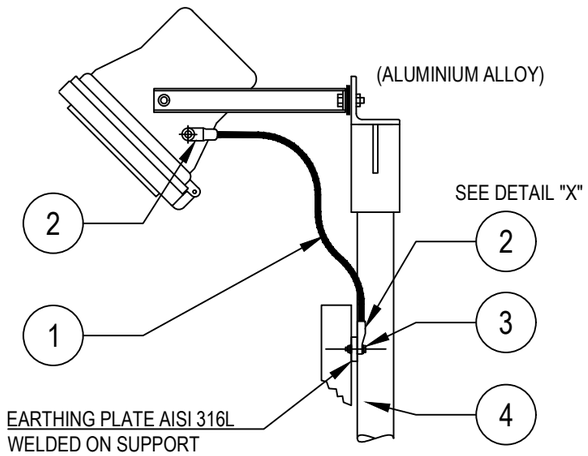
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

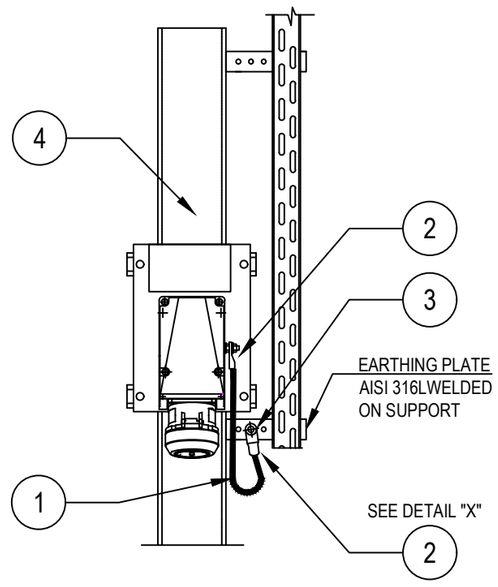
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

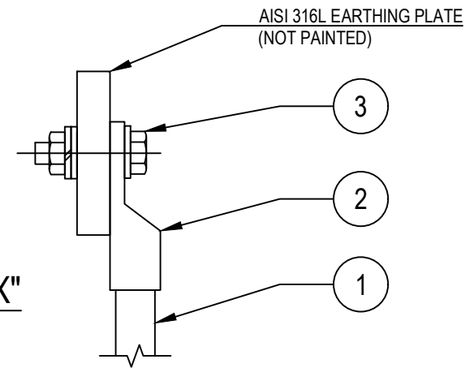
LIGHTING FIXTURE/GENERAL ITEM ON POLE



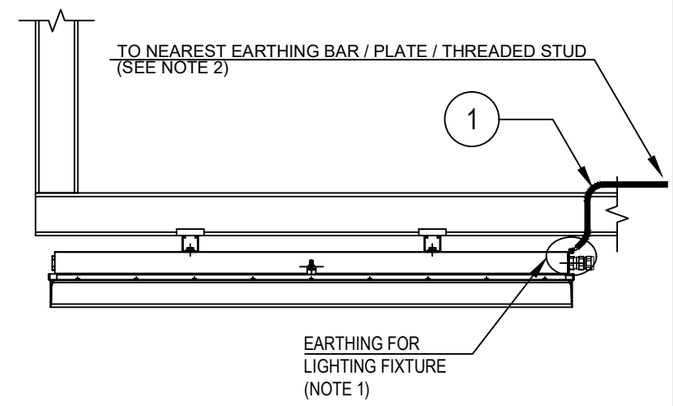
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_H	05/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 006 | REV. 02

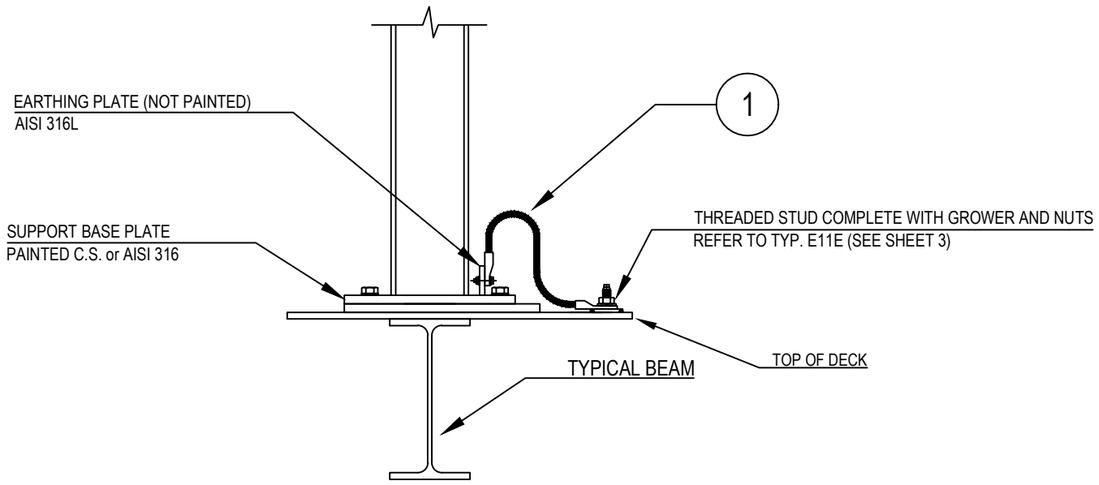
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

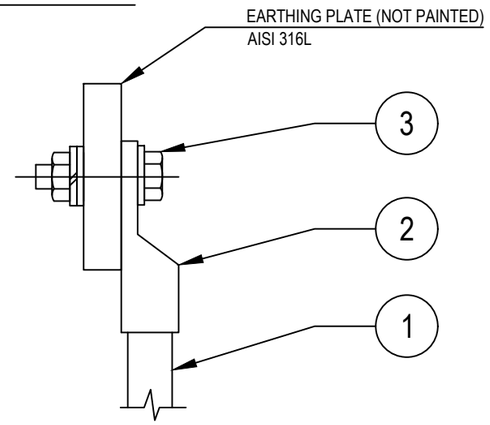
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_H	05/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

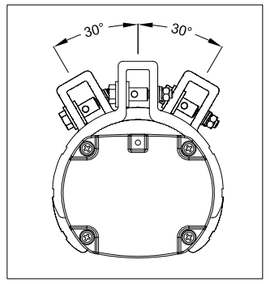
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

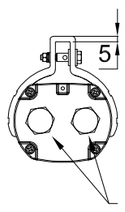
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

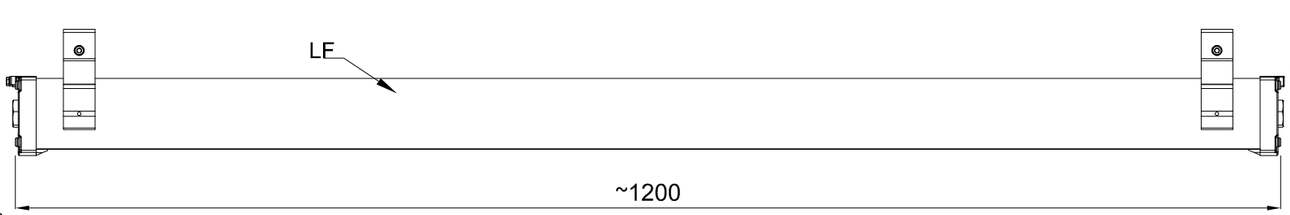
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

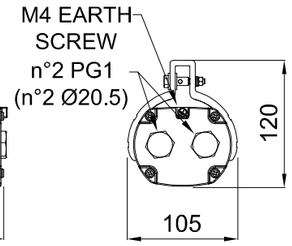


n°2 PG1
(n°2 Ø20.5)

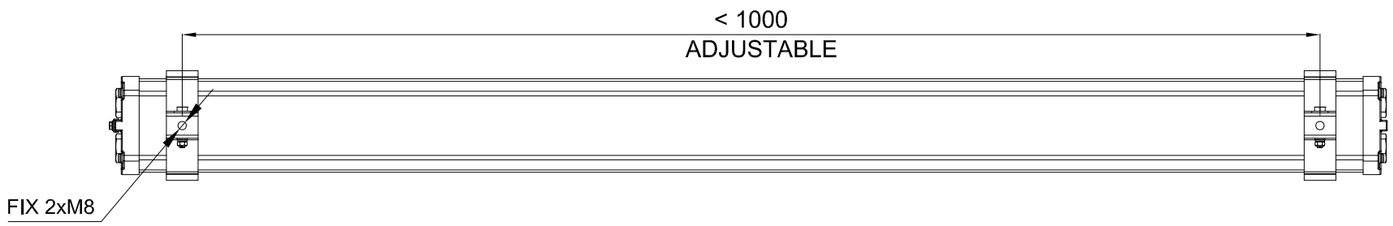
FRONT SIDE



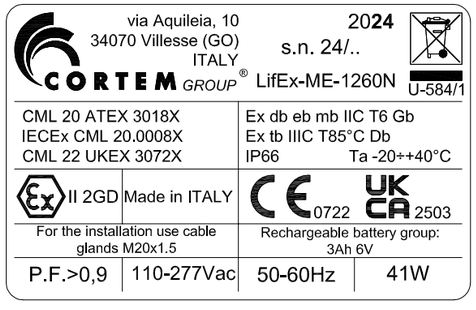
RIGHT SIDE (IN)



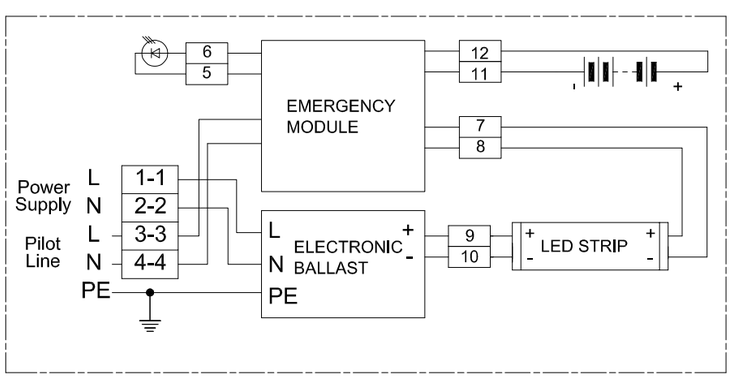
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

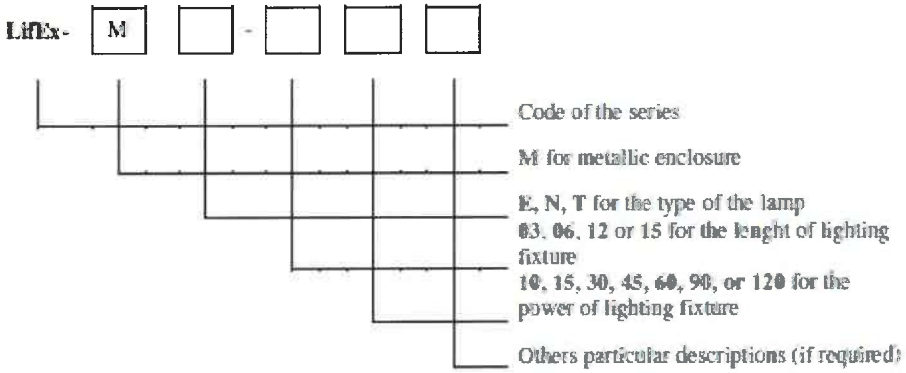
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

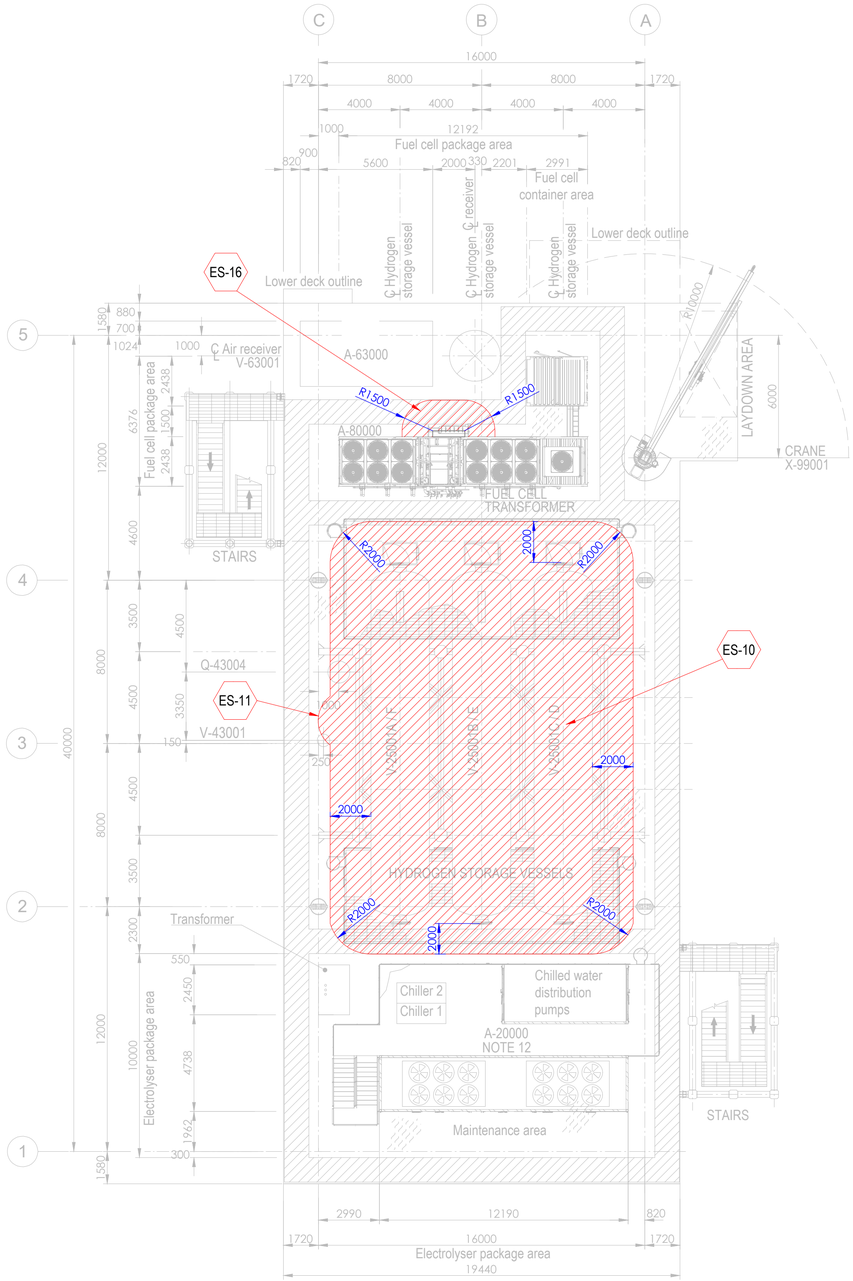
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

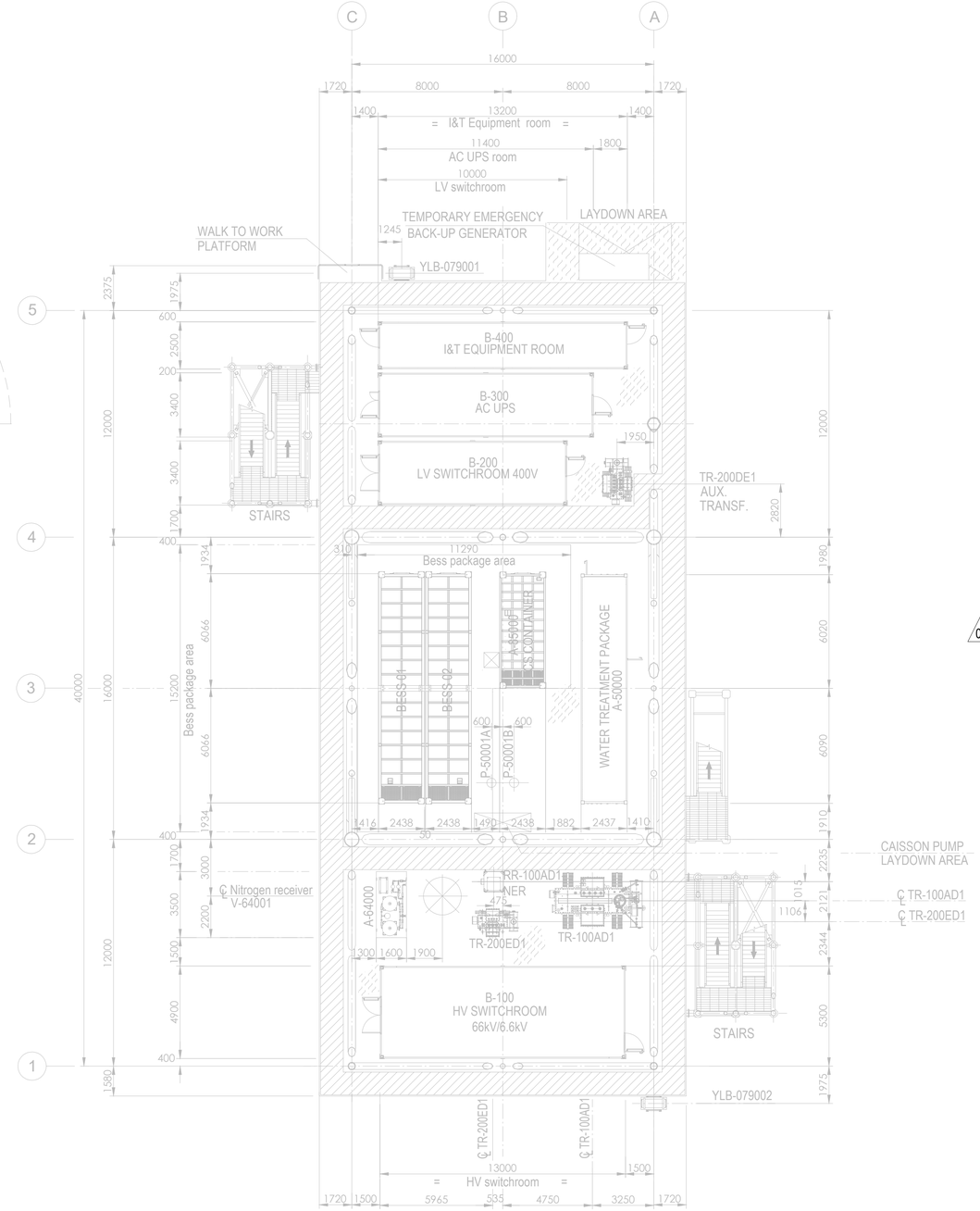
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



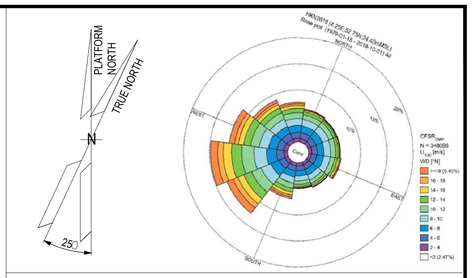
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

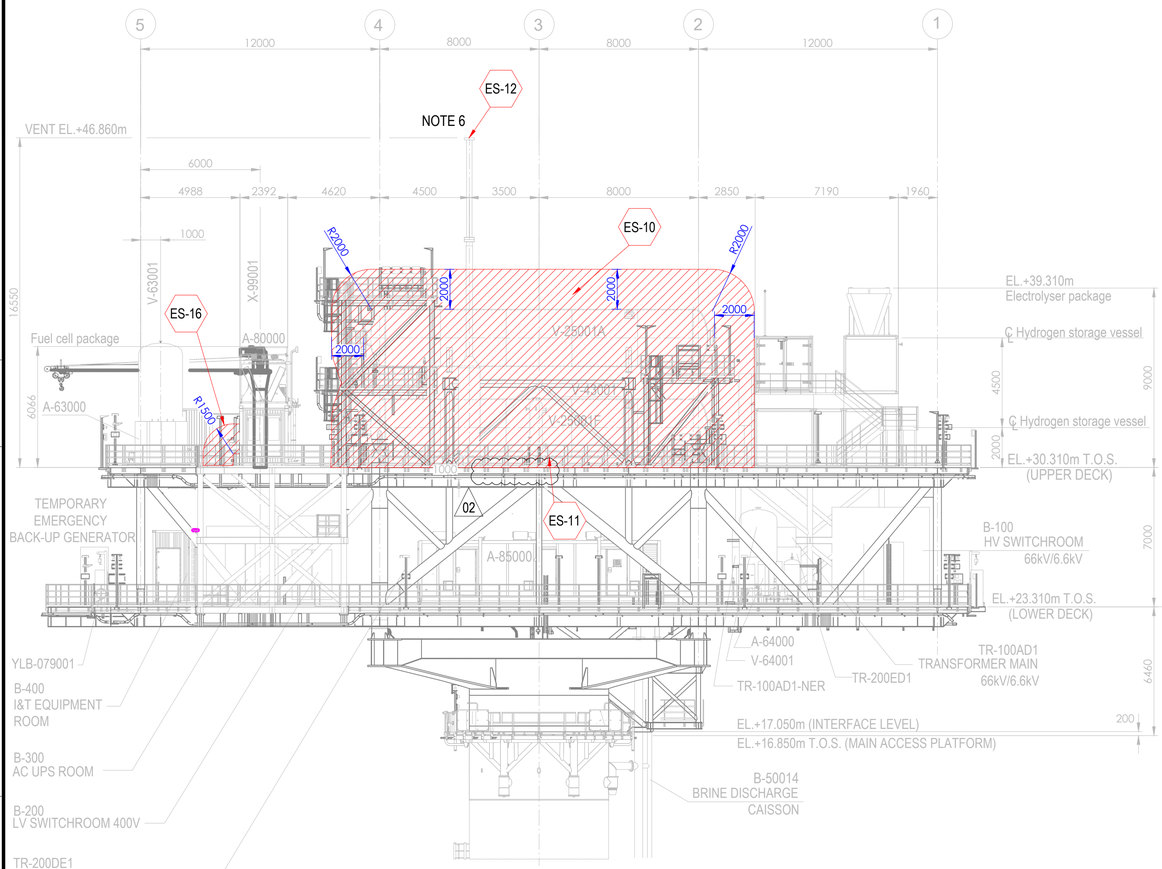
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

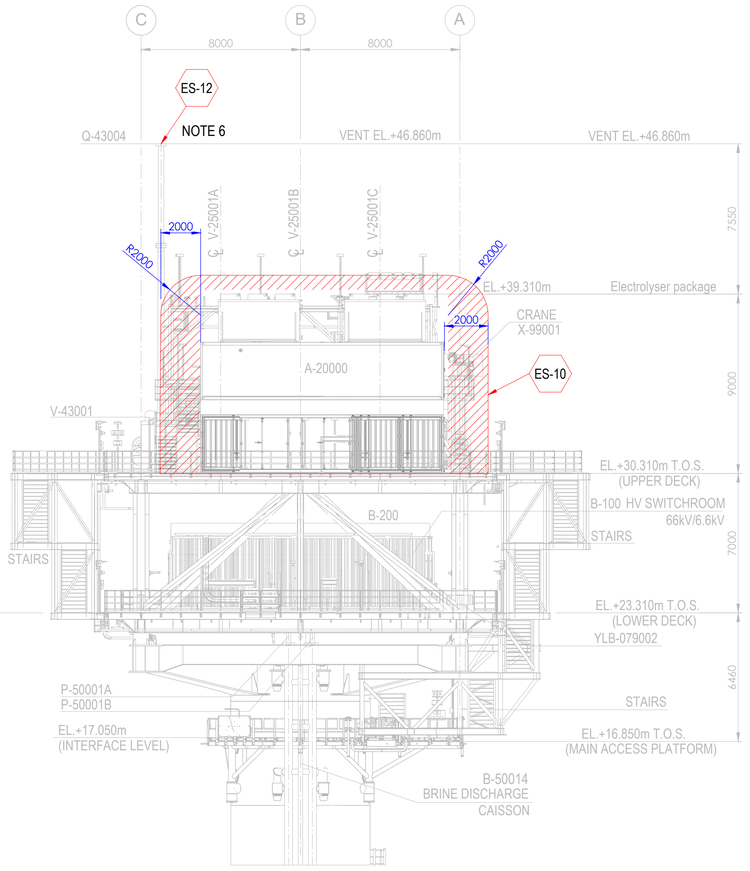
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

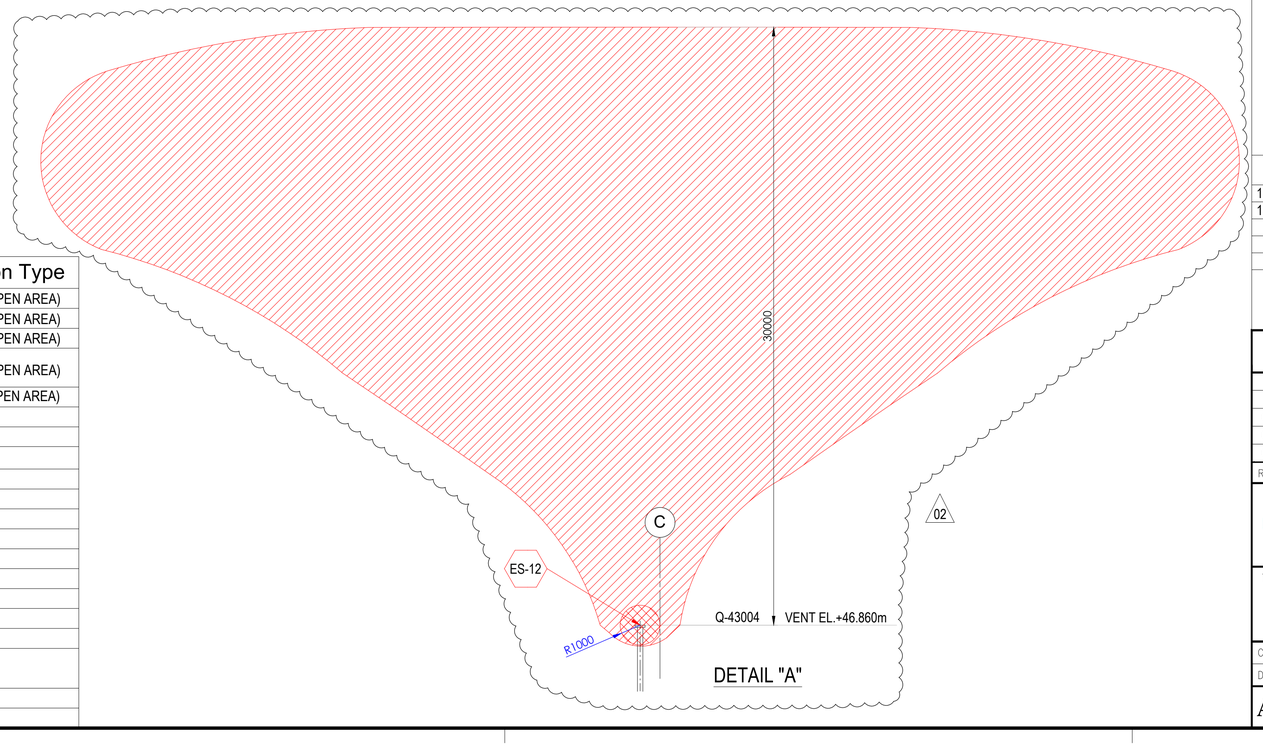


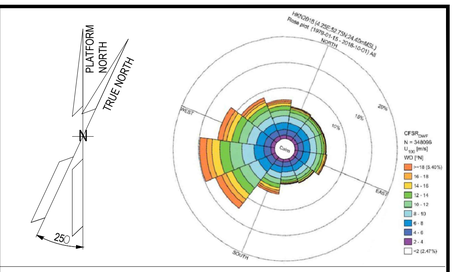
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-12	: EMERGENCY LIGHT	Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck	Module	UD
TASK	code	C10001688	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	OK	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	OK	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-12	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001688		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-12	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001688		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

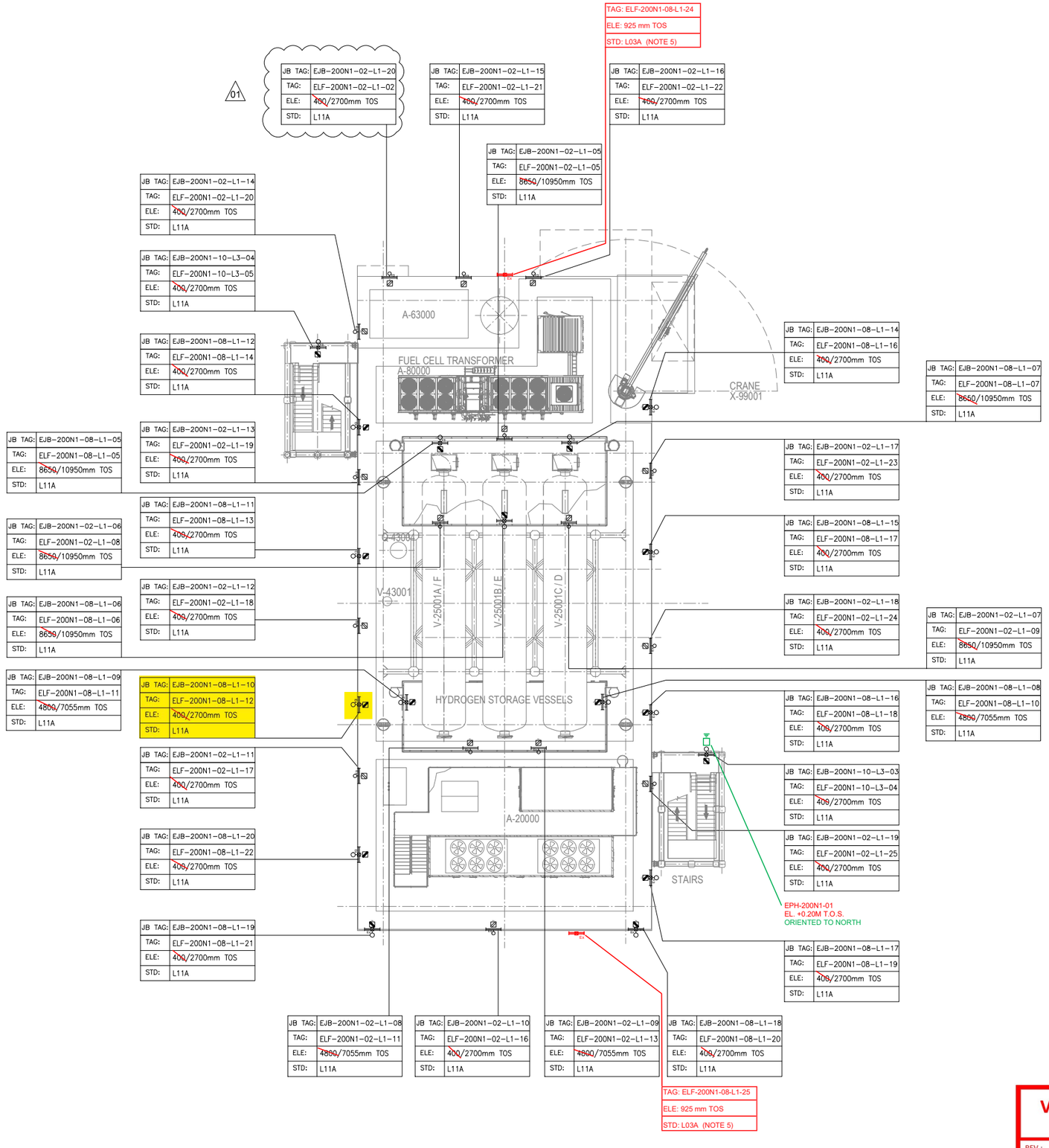
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

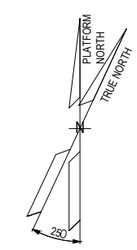
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-28	2025-01-22	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-28T07:34:47.357Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-22T17:17:26.124Z	

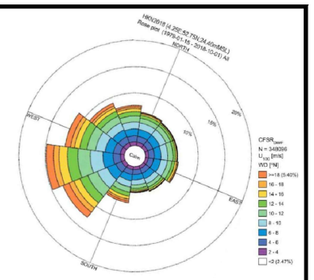
DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG:	JB-TAG
TAG:	TAG
ELE:	ELEVATION
STD:	STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_G	09/01/25	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

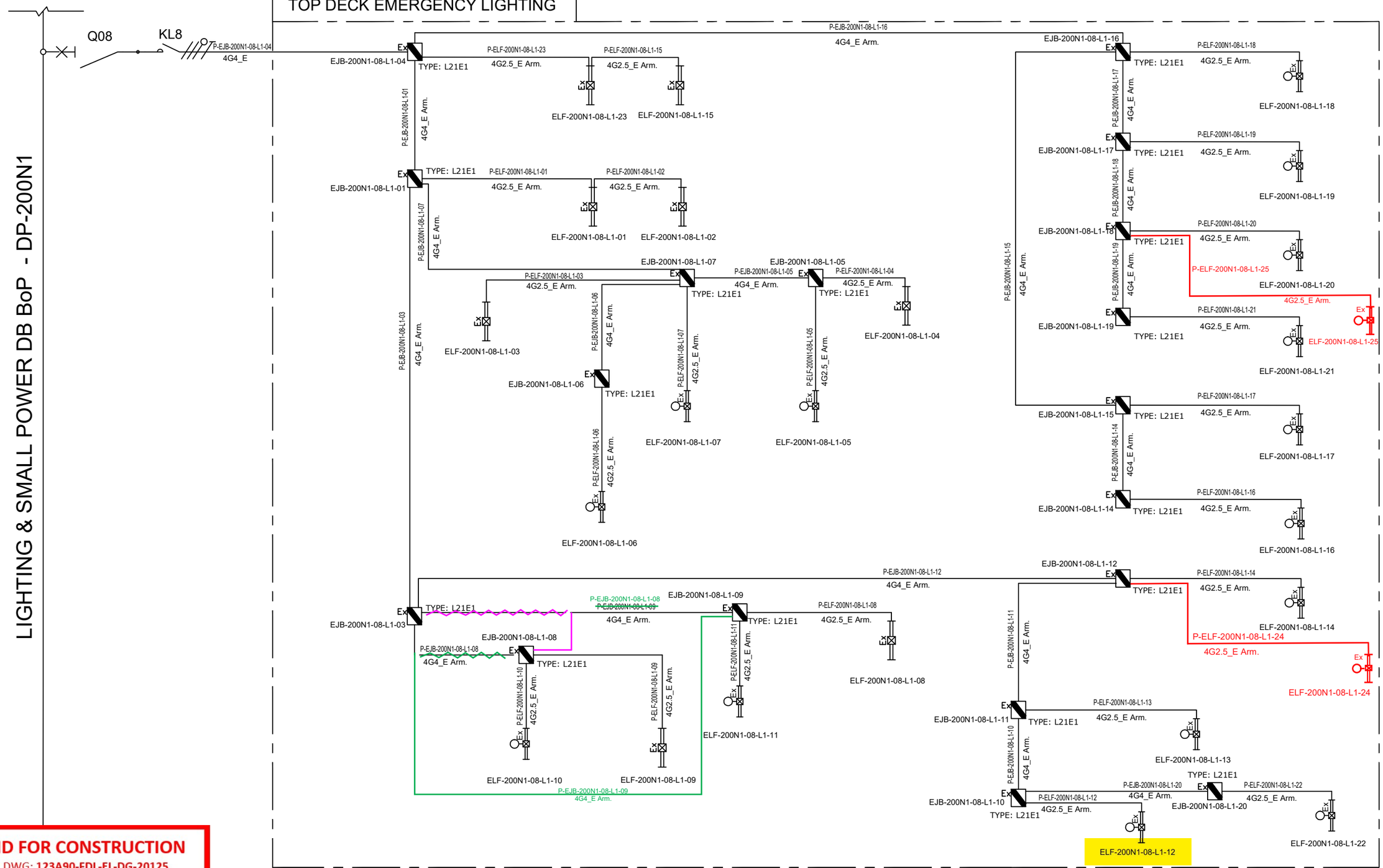
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

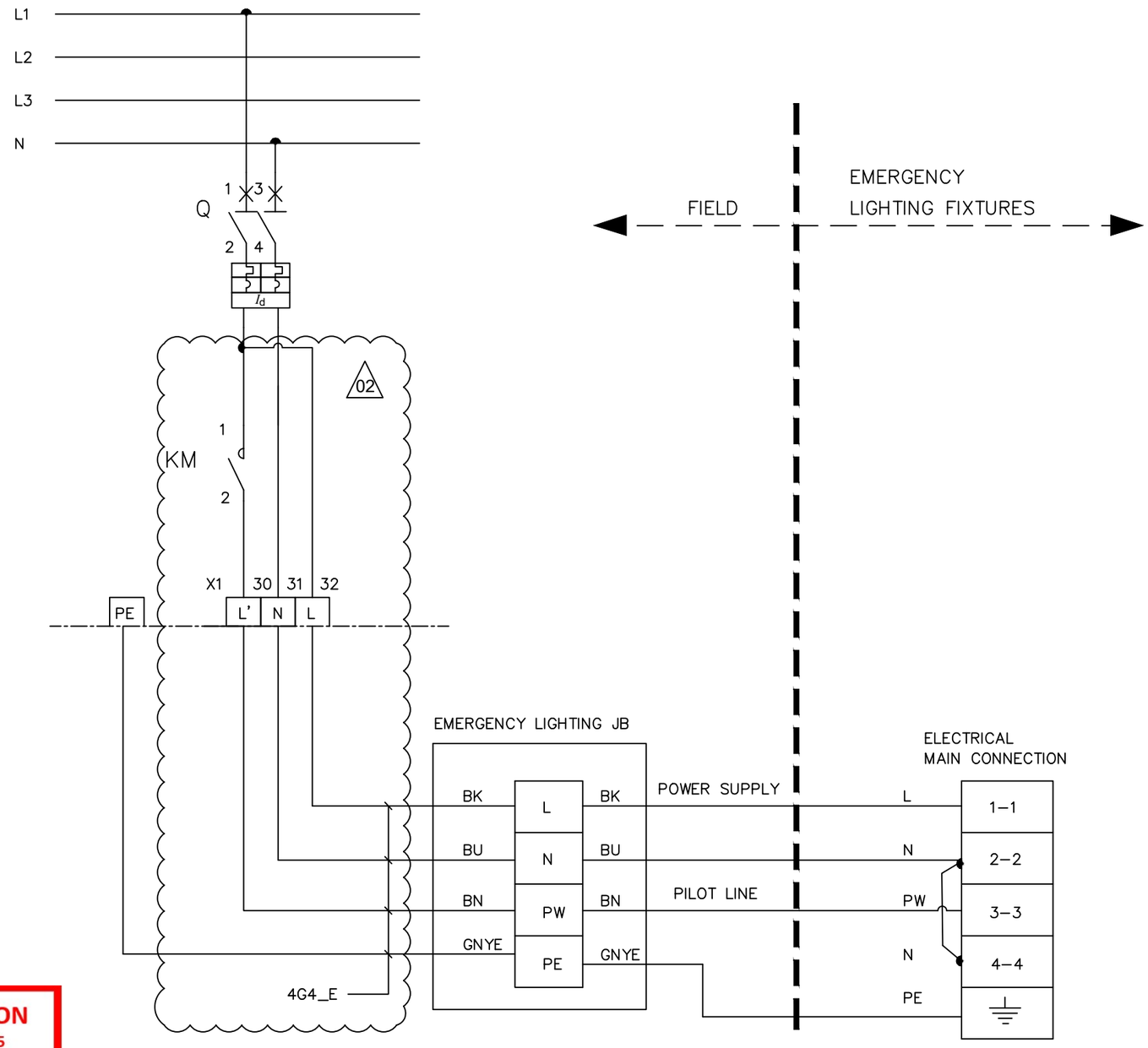
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DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_G	16/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

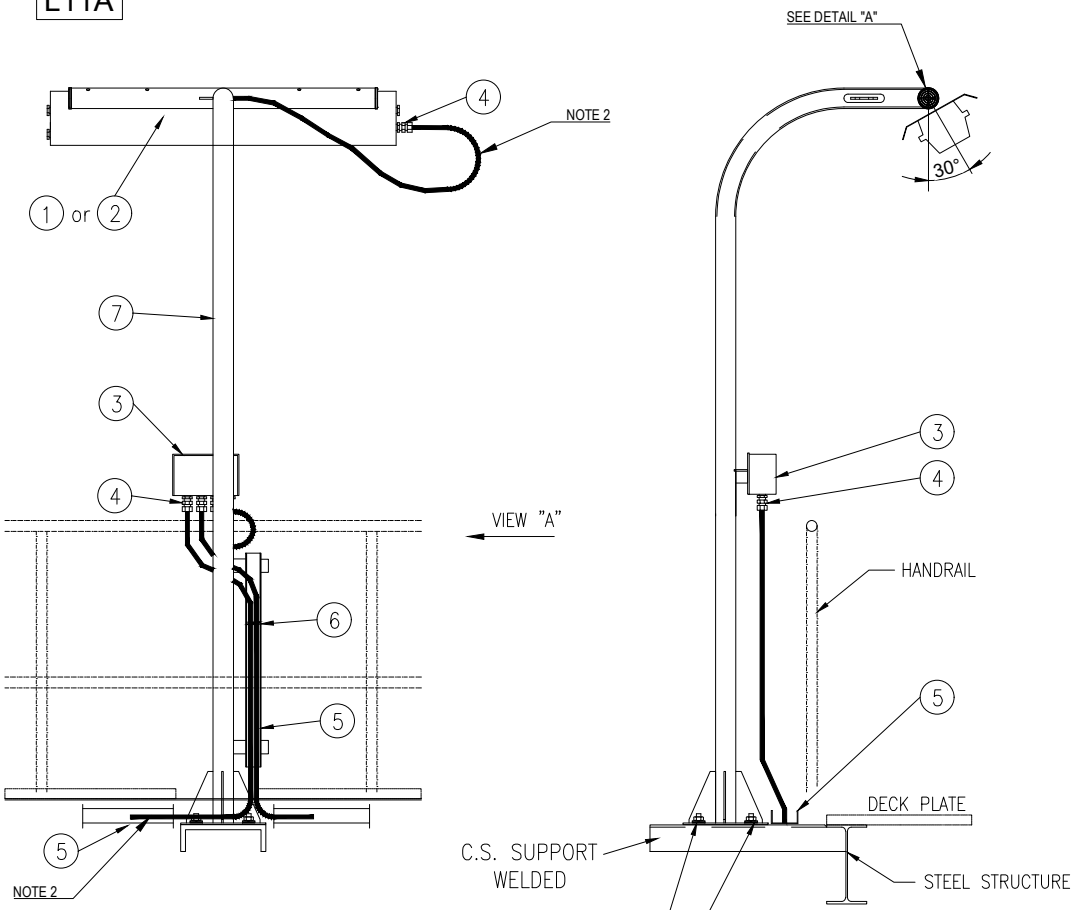
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REV. 02

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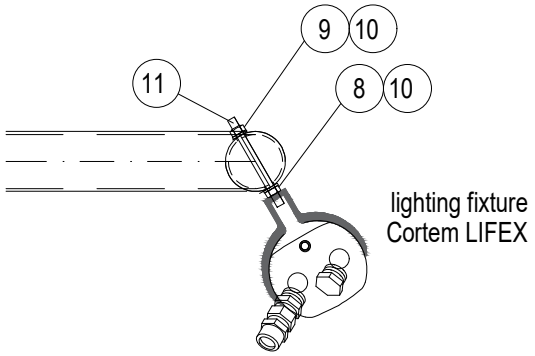
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L11A



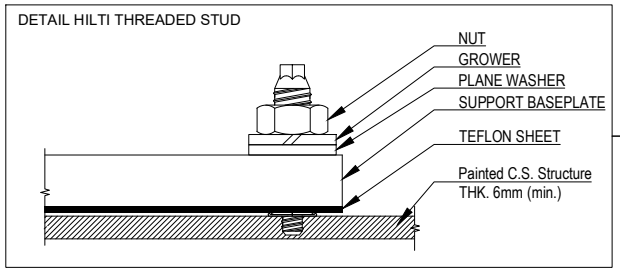
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

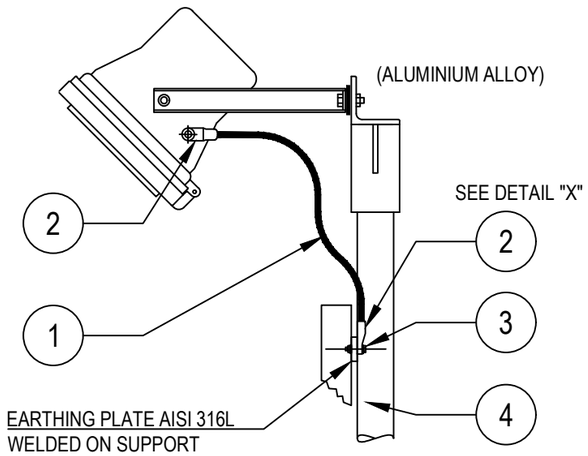
F.to UNI A3: 420mmx297mm

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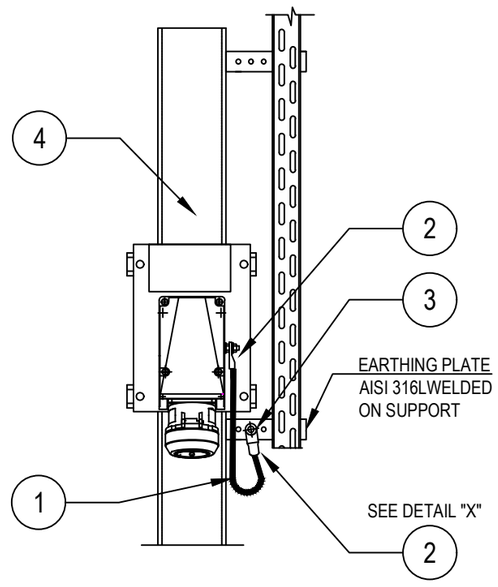
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

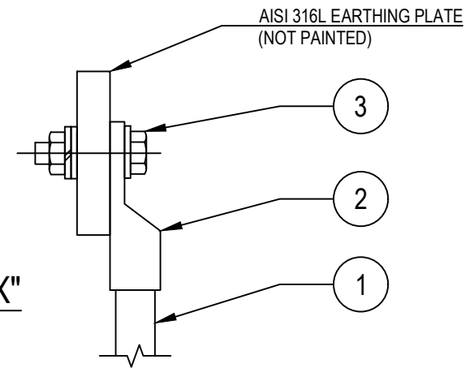
LIGHTING FIXTURE/GENERAL ITEM ON POLE



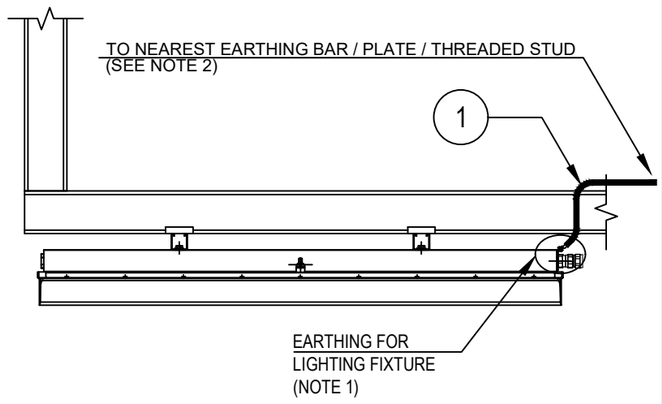
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

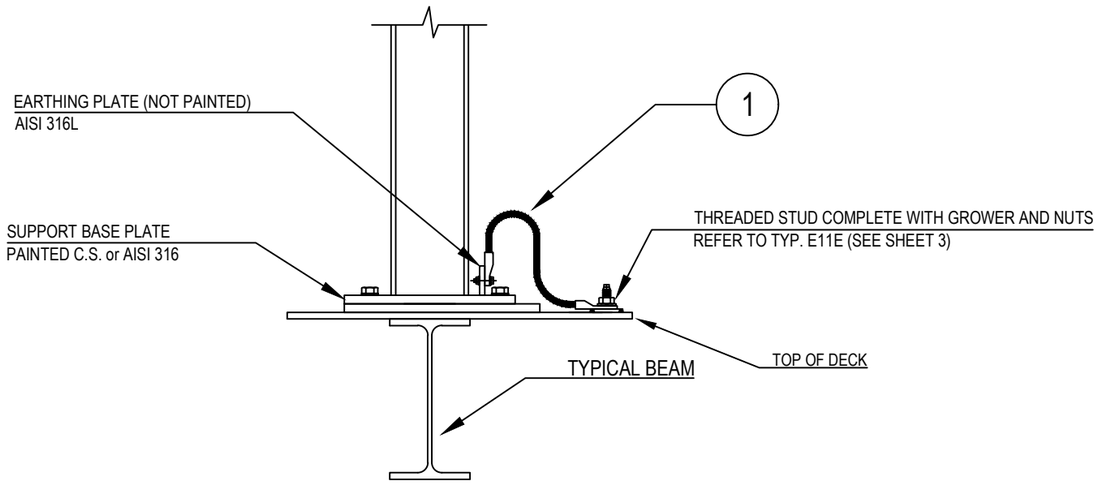
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

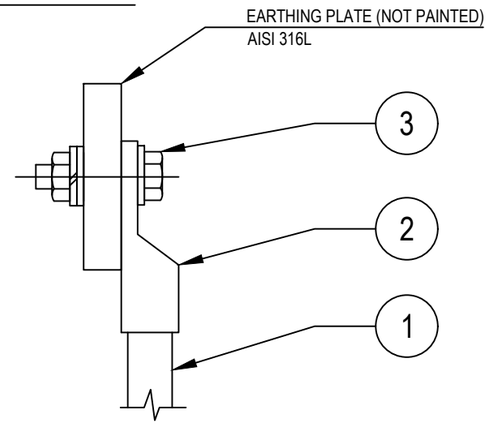
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

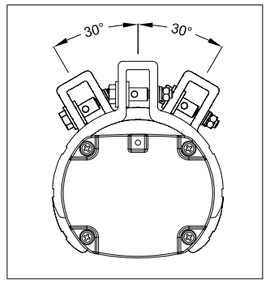
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

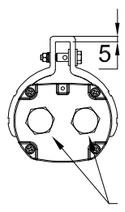
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

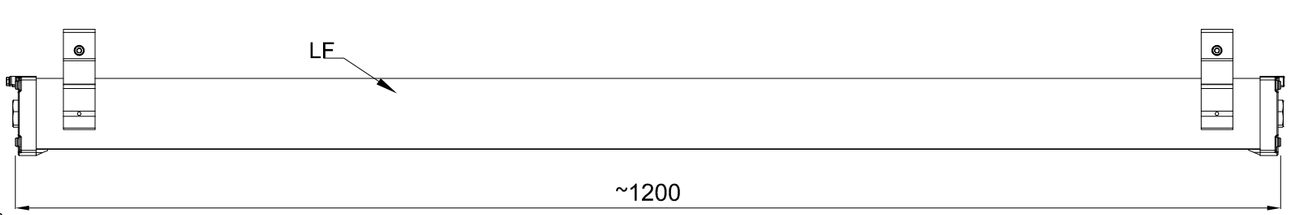
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

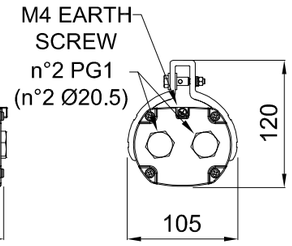


n°2 PG1
(n°2 Ø20.5)

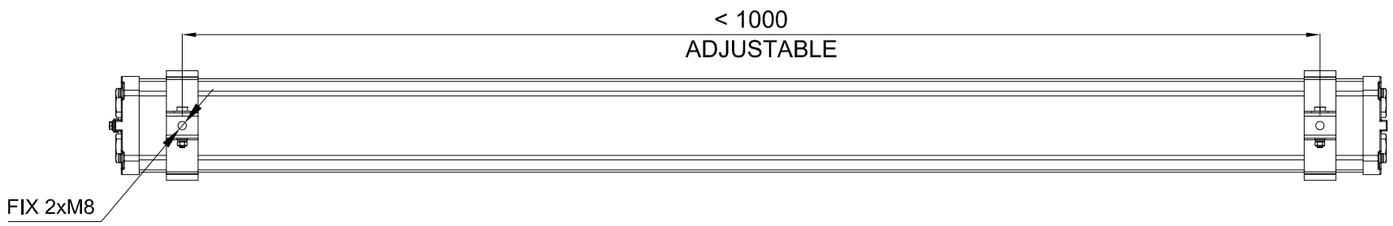
FRONT SIDE



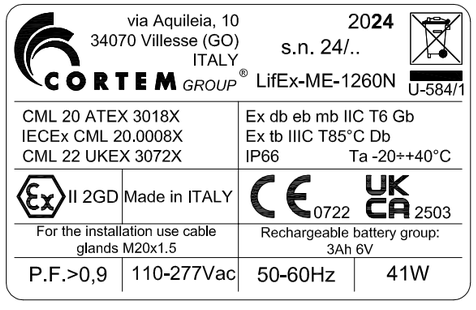
RIGHT SIDE (IN)



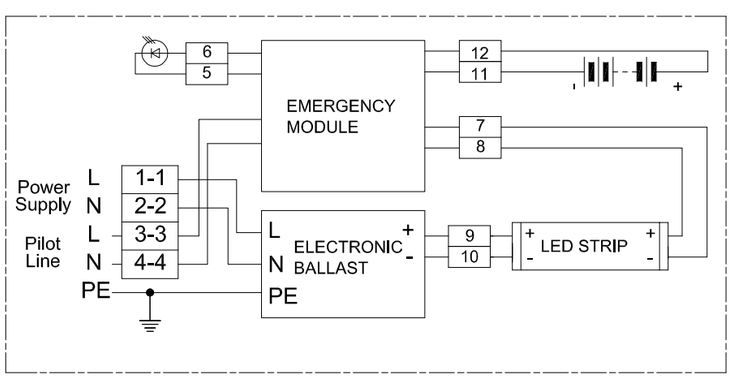
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

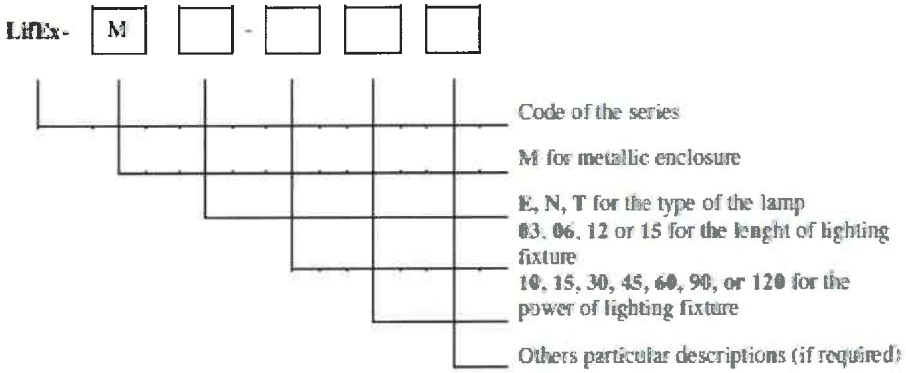
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

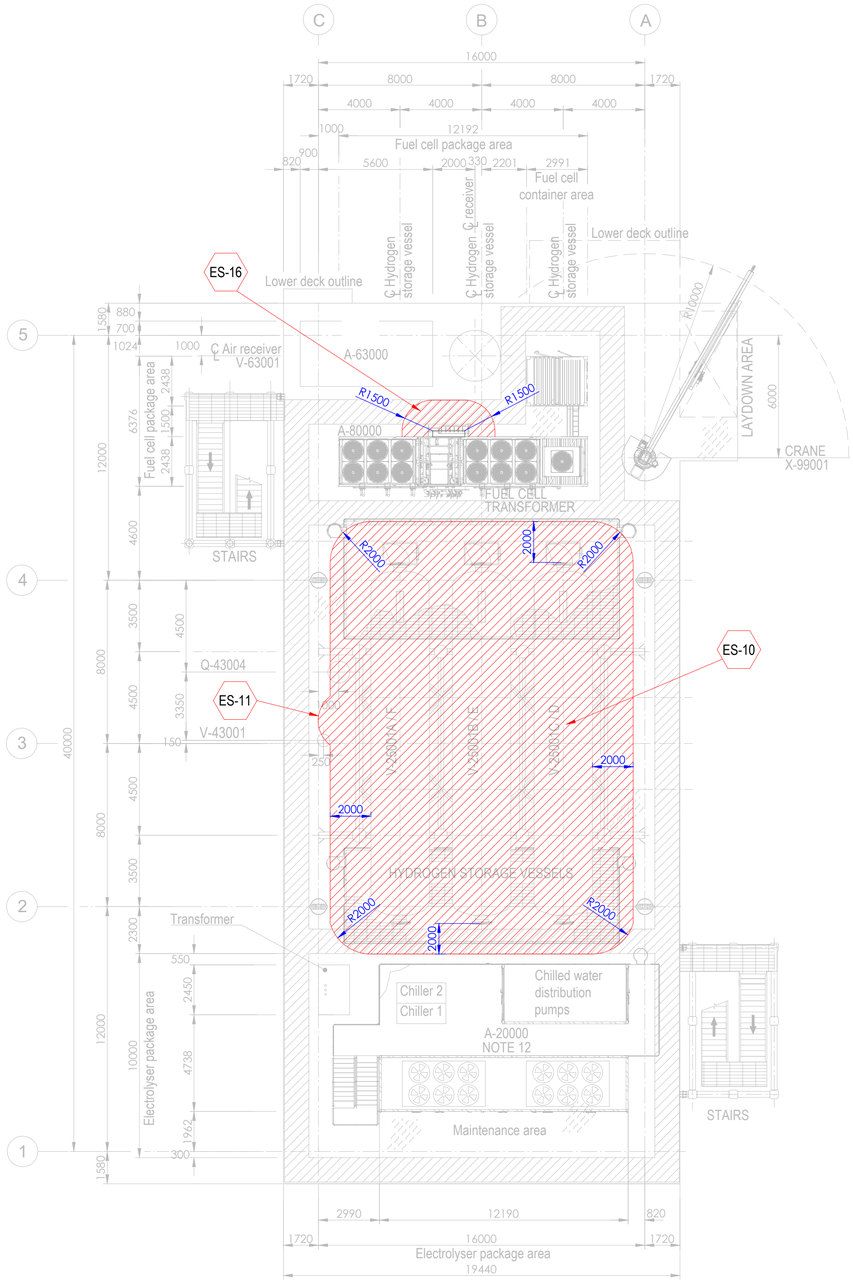
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

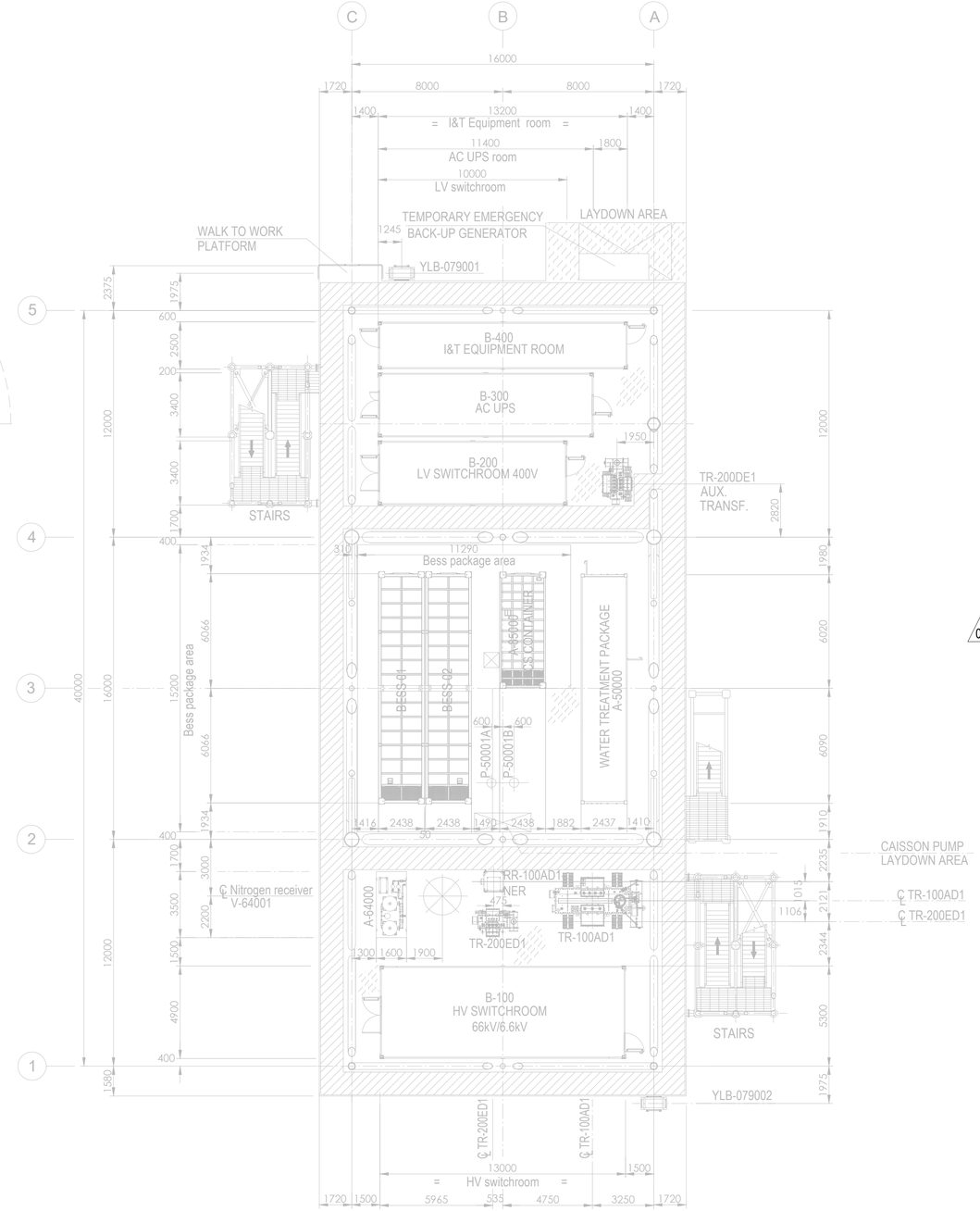
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



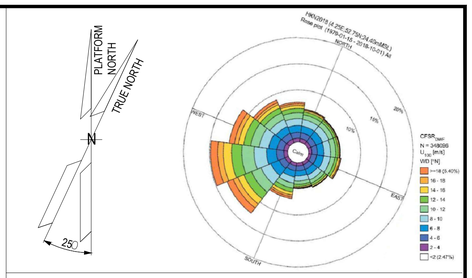
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

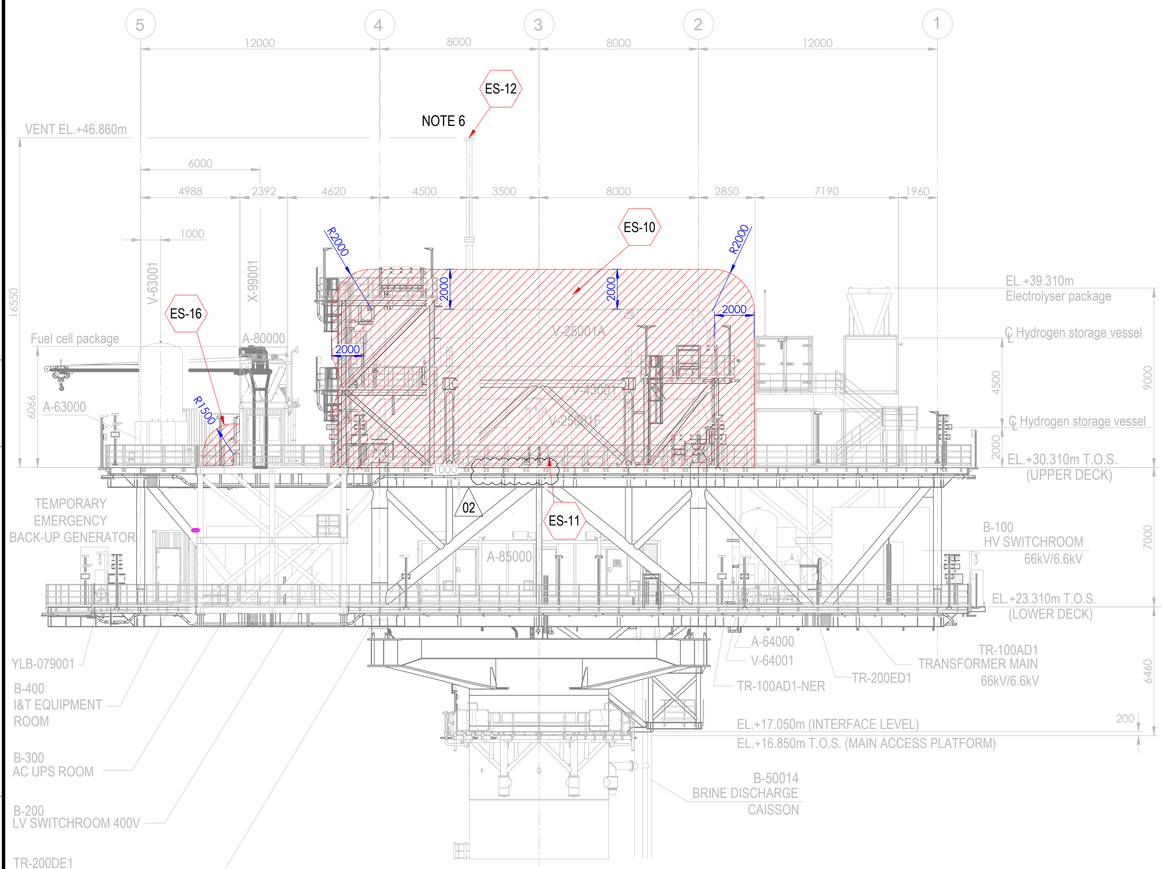
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

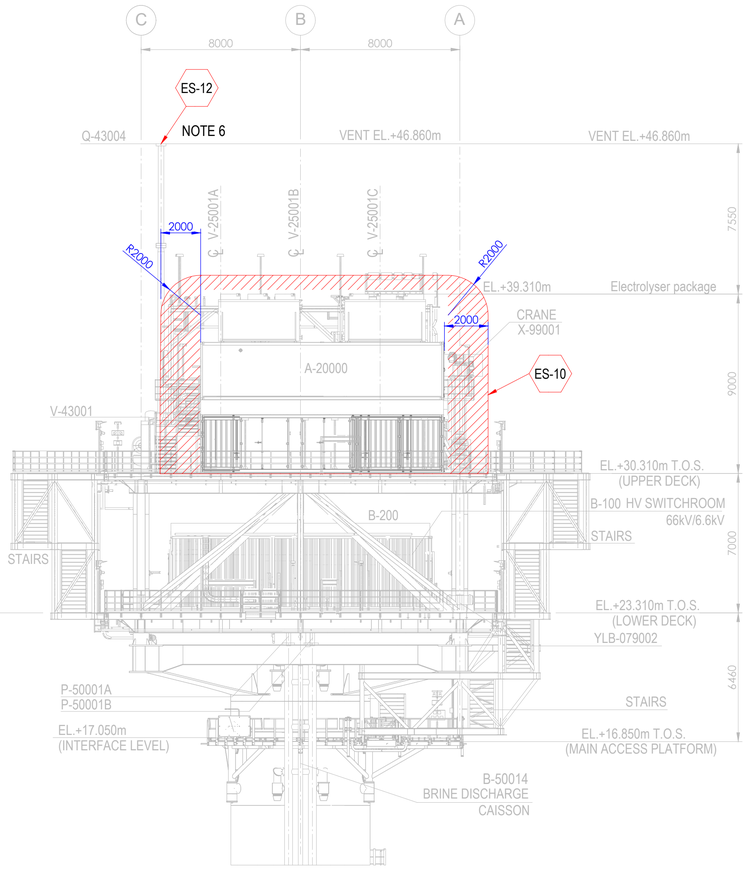
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

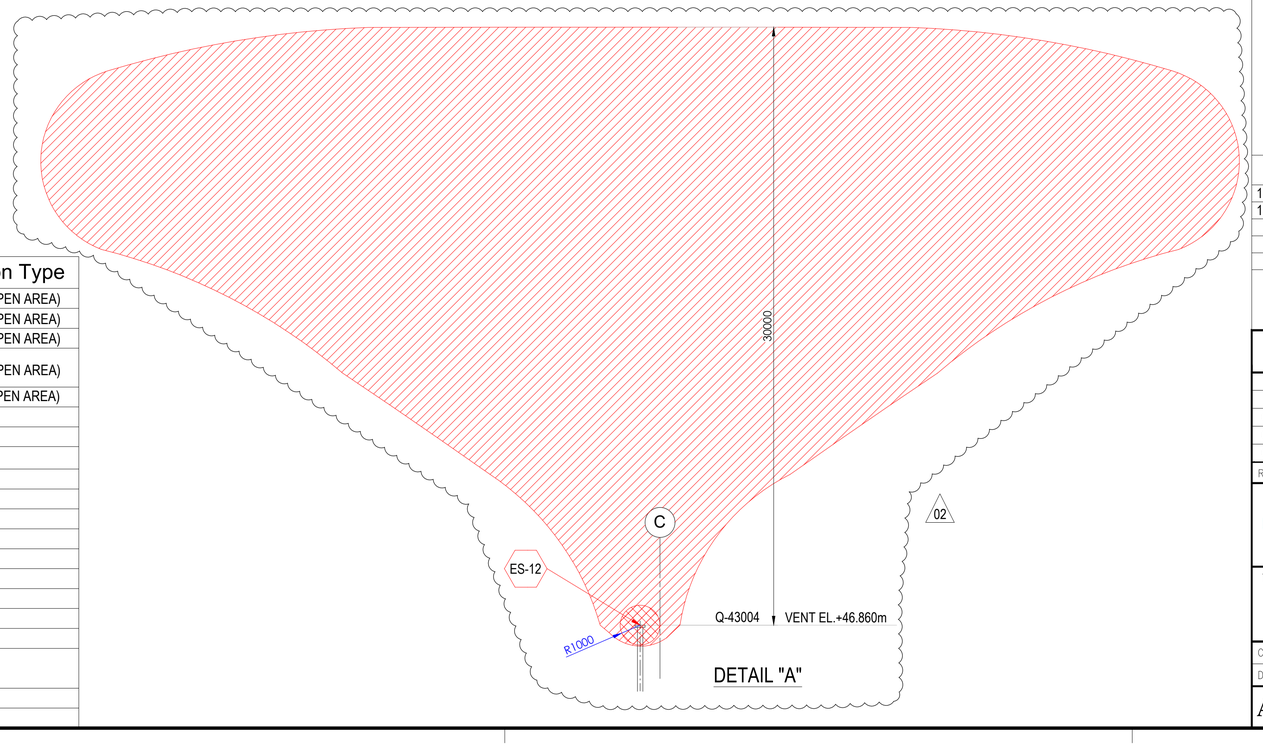


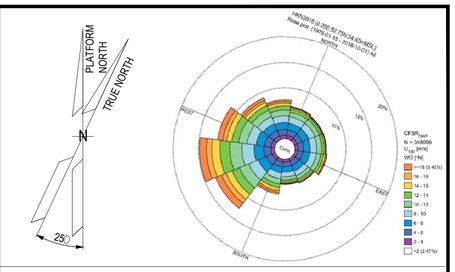
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-13 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001689	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T5	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	PL	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	OK	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	OK	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-13	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001689		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	ELF-200N1-08-L1-13	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001689		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

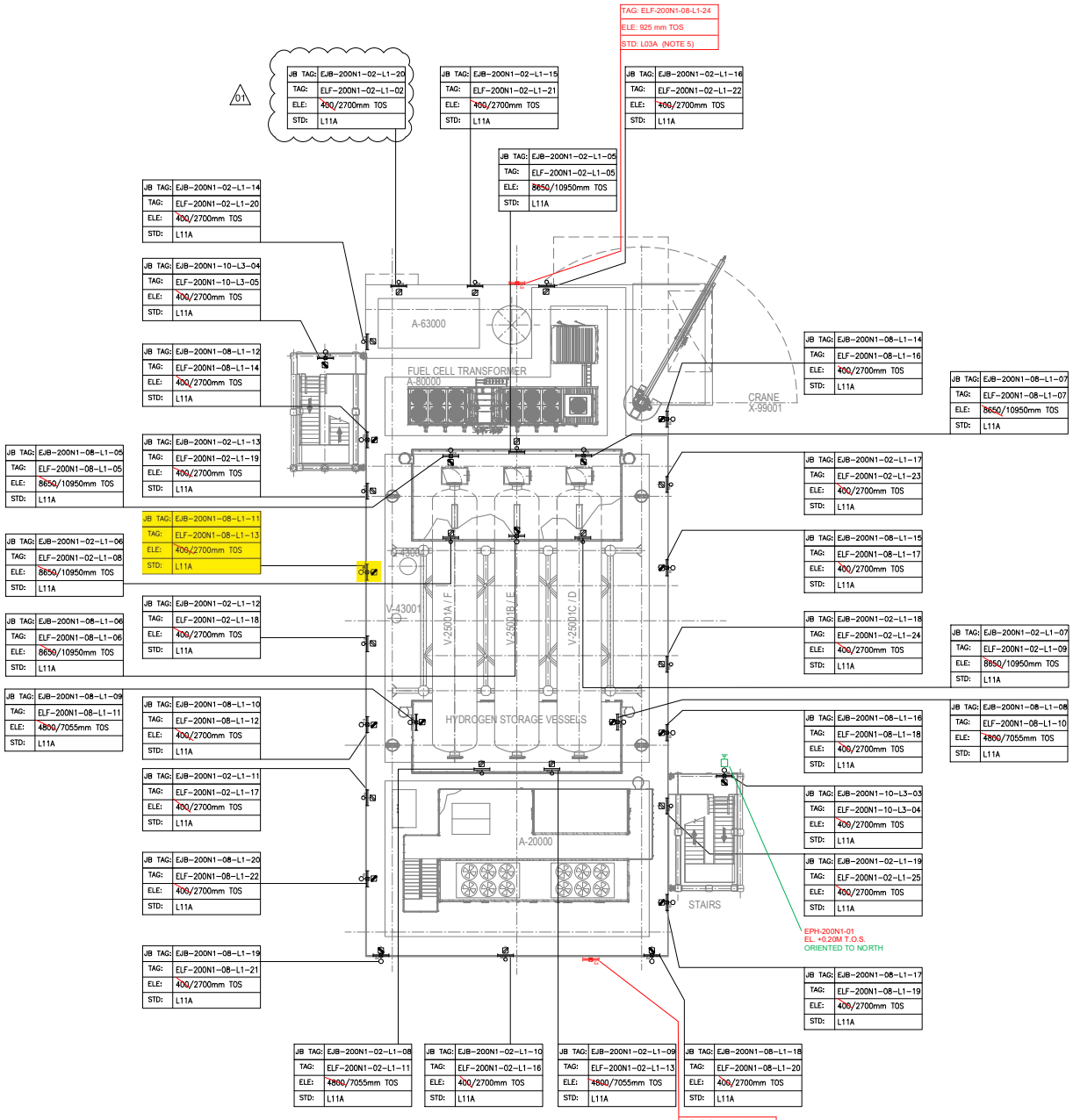
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

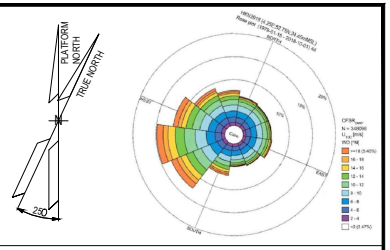
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-28	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-28T07:35:03.305Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-02T16:14:10.310Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

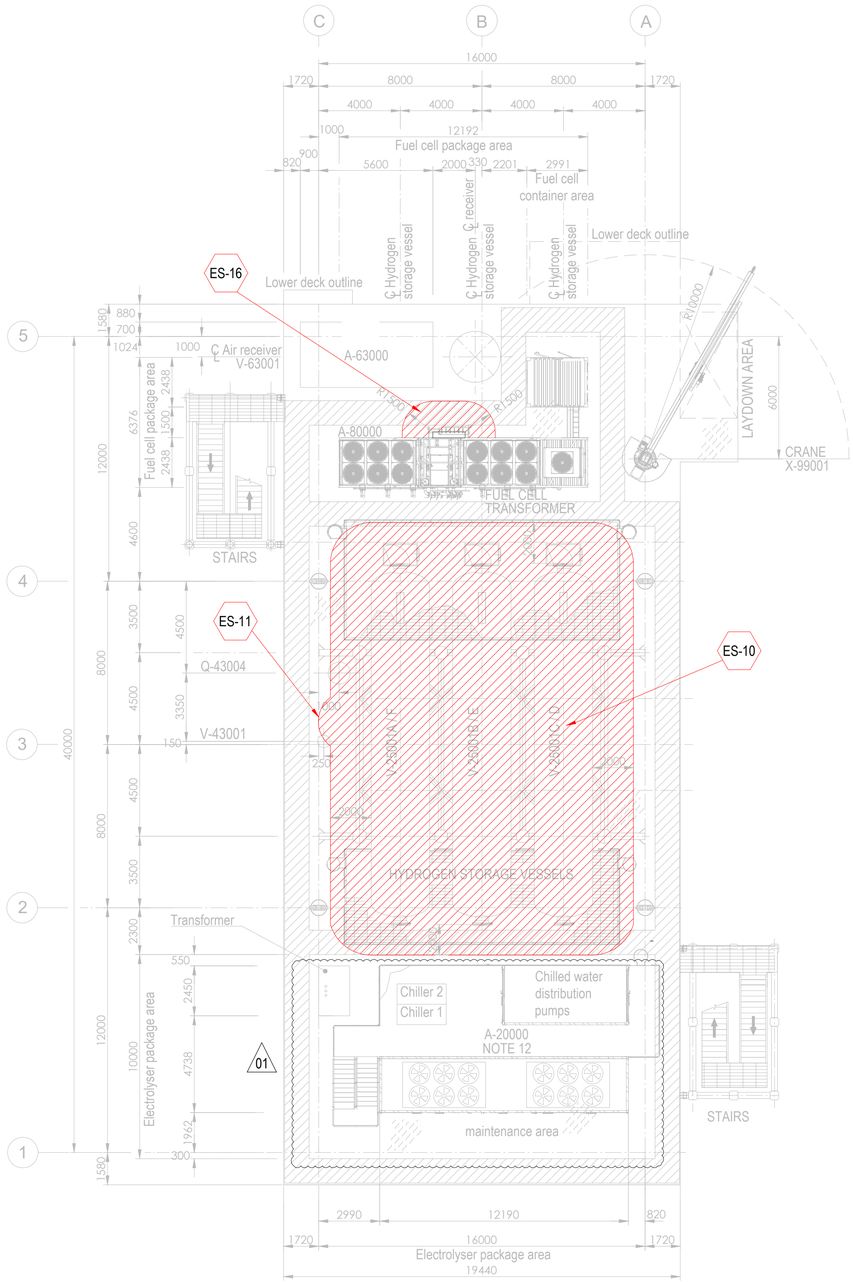
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

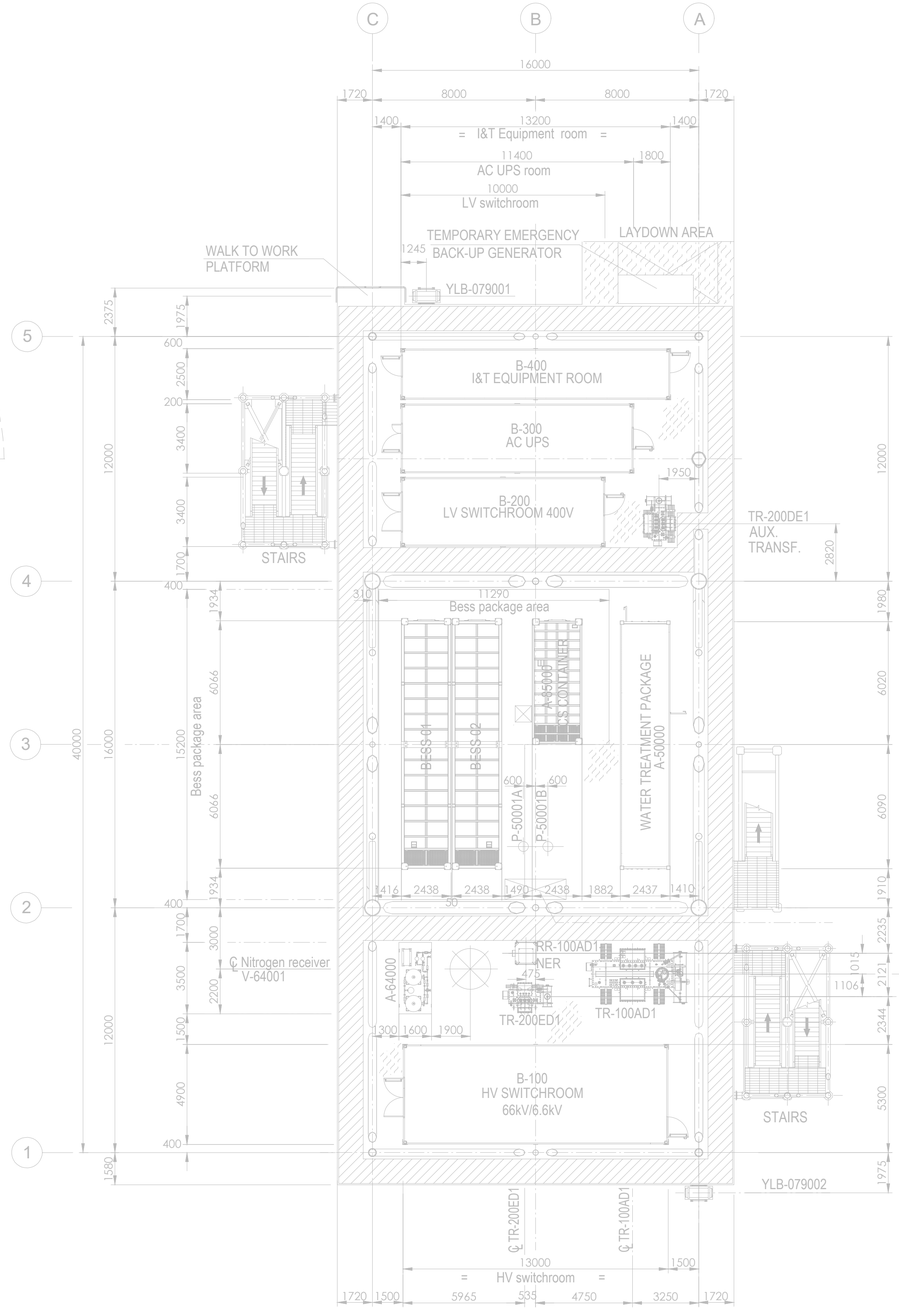
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 01



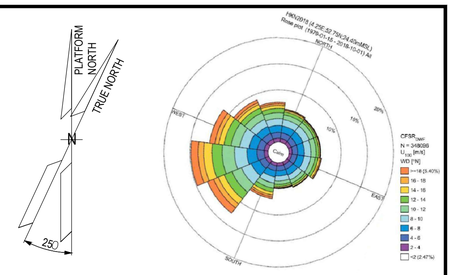
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

01

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

01

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

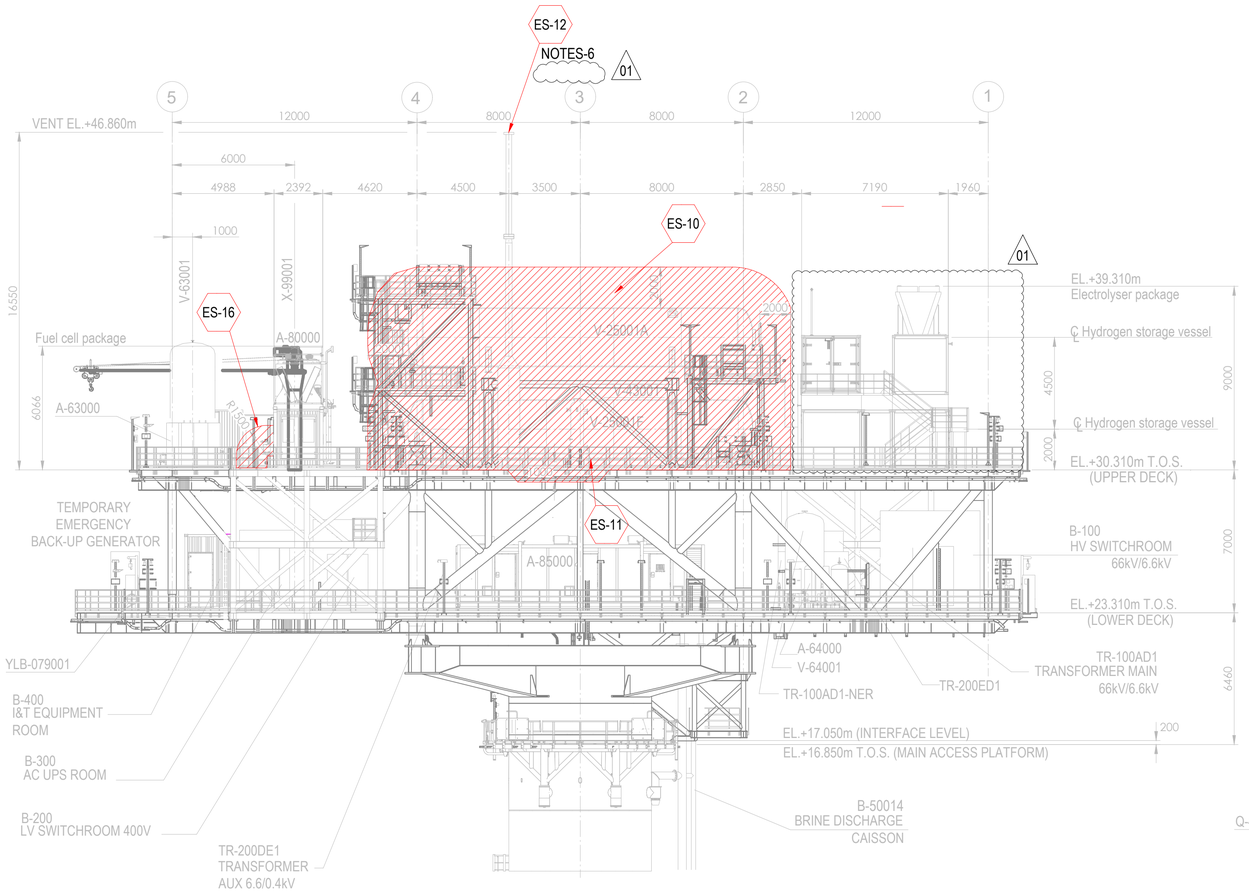
TITLE : BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30022	SHEET 001	REV. 01

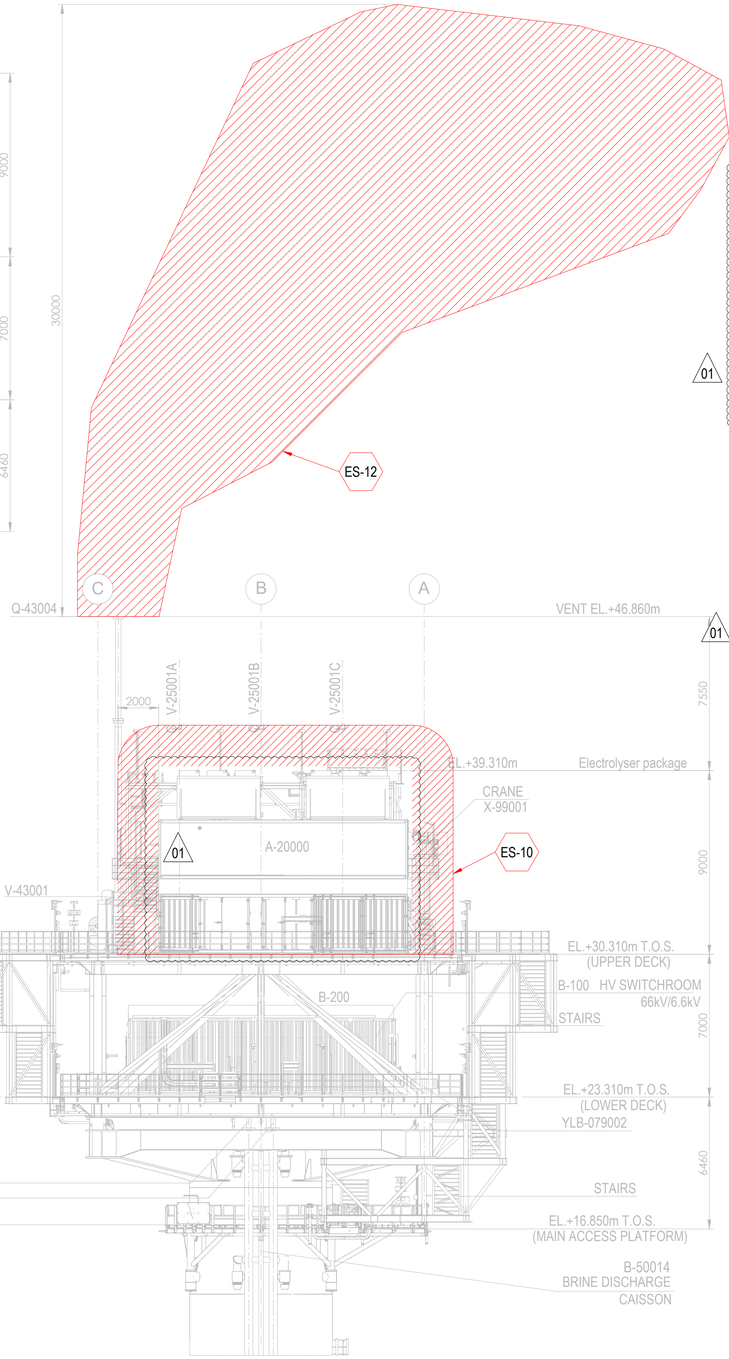
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 01



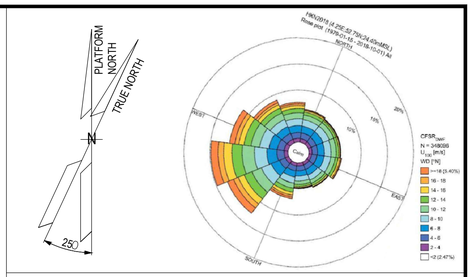
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

01

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. (ES12) IS SHOWN ONLY ON ELEVATION LOOKING NORTH ON THIS LAYOUT
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

01

LEGEND

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30024	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30024 Rev.01

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1

- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. → EJB-200N1-08-L1-01 — TYPE: L21E1
  - P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
  - P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
  - P-EJB-200N1-08-L1-07 — 4G4_E Arm. → EJB-200N1-08-L1-07 — TYPE: L21E1
    - P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
    - P-EJB-200N1-08-L1-06 — 4G4_E Arm. → EJB-200N1-08-L1-06 — TYPE: L21E1
      - P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06
    - P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
    - P-EJB-200N1-08-L1-05 — 4G4_E Arm. → EJB-200N1-08-L1-05 — TYPE: L21E1
      - P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
      - P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

P-EJB-200N1-08-L1-16 — 4G4_E Arm. → EJB-200N1-08-L1-16 — TYPE: L21E1

- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm. → EJB-200N1-08-L1-17 — TYPE: L21E1
  - P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
  - P-EJB-200N1-08-L1-18 — 4G4_E Arm. → EJB-200N1-08-L1-18 — TYPE: L21E1
    - P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
    - P-EJB-200N1-08-L1-19 — 4G4_E Arm. → EJB-200N1-08-L1-19 — TYPE: L21E1
      - P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
      - P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25
    - P-EJB-200N1-08-L1-15 — 4G4_E Arm. → EJB-200N1-08-L1-15 — TYPE: L21E1
      - P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
      - P-EJB-200N1-08-L1-14 — 4G4_E Arm. → EJB-200N1-08-L1-14 — TYPE: L21E1
        - P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

EJB-200N1-08-L1-03 — TYPE: L21E1

- P-EJB-200N1-08-L1-09 — 4G4_E Arm. → EJB-200N1-08-L1-09 — TYPE: L21E1
  - P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
  - P-EJB-200N1-08-L1-11 — 4G4_E Arm. → EJB-200N1-08-L1-11 — TYPE: L21E1
    - P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11
- P-EJB-200N1-08-L1-08 — 4G4_E Arm. → EJB-200N1-08-L1-08 — TYPE: L21E1
  - P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
  - P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09

P-EJB-200N1-08-L1-12 — 4G4_E Arm. → EJB-200N1-08-L1-12 — TYPE: L21E1

- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24
- P-EJB-200N1-08-L1-11 — 4G4_E Arm. → EJB-200N1-08-L1-11 — TYPE: L21E1
  - P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
  - P-EJB-200N1-08-L1-10 — 4G4_E Arm. → EJB-200N1-08-L1-10 — TYPE: L21E1
    - P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12
    - P-EJB-200N1-08-L1-20 — 4G4_E Arm. → EJB-200N1-08-L1-20
      - P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

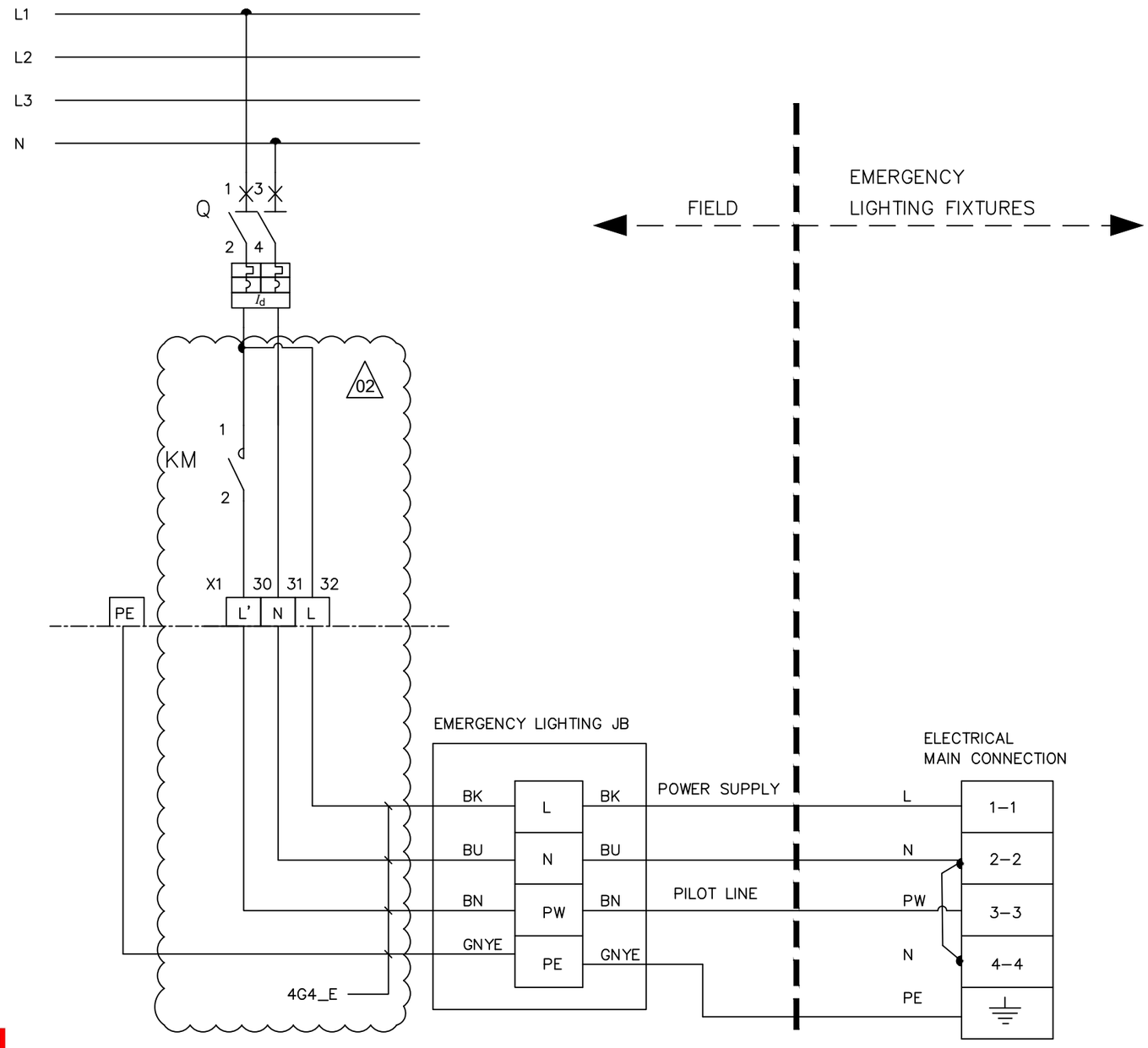
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

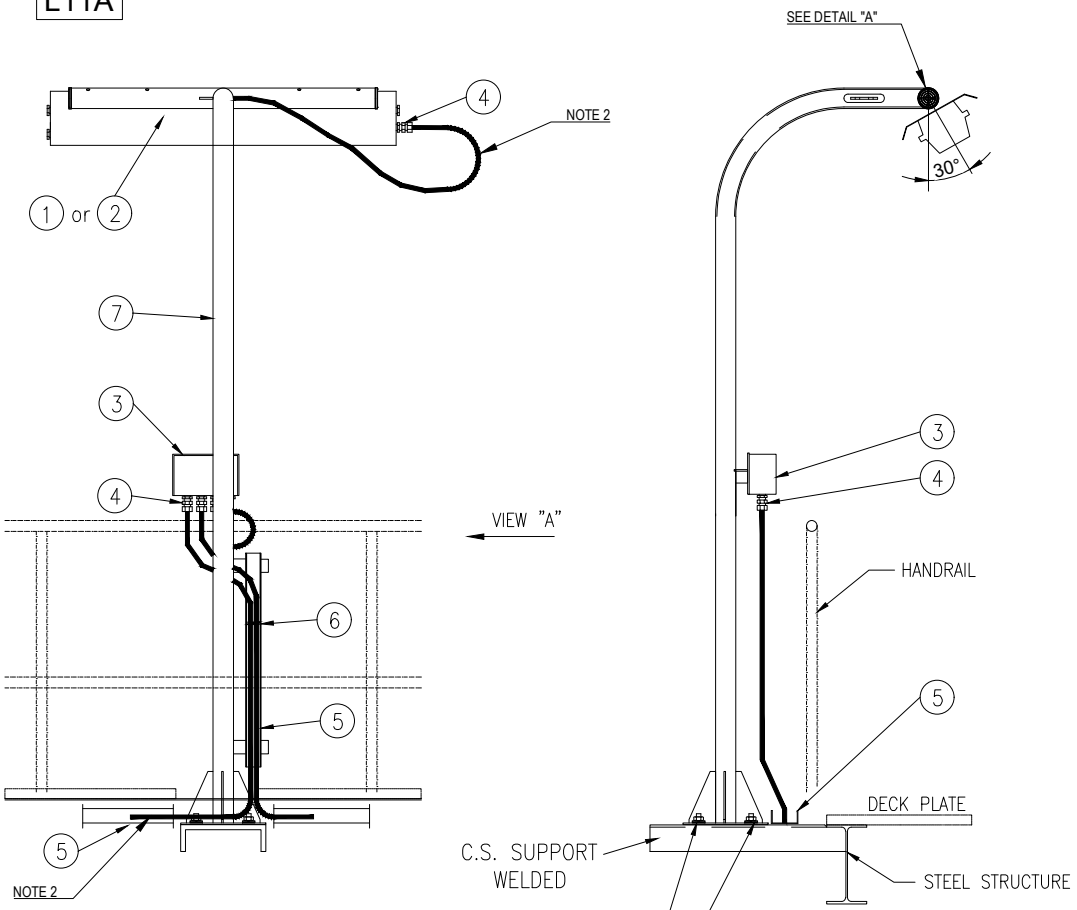
SHEET 014

REV. 02

F.to UNI A3: 420mmx297mm

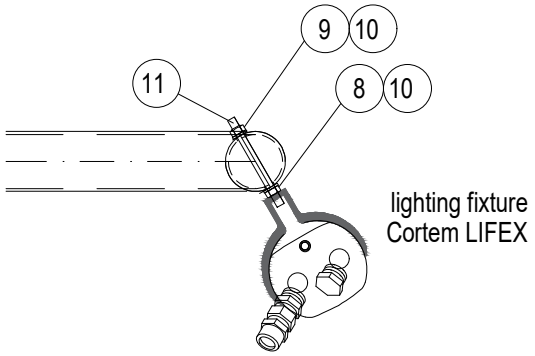
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L11A



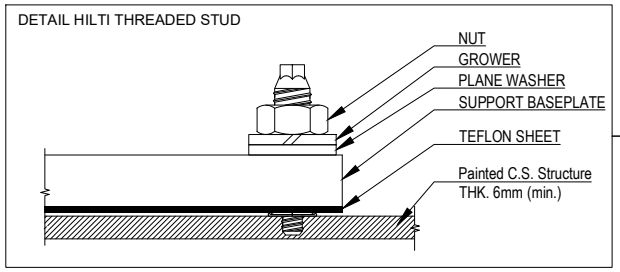
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

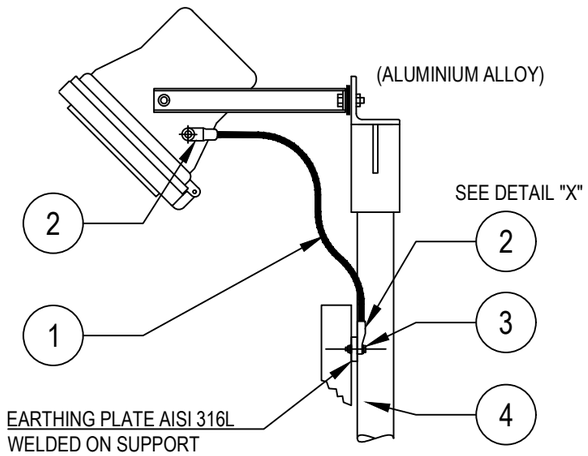
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

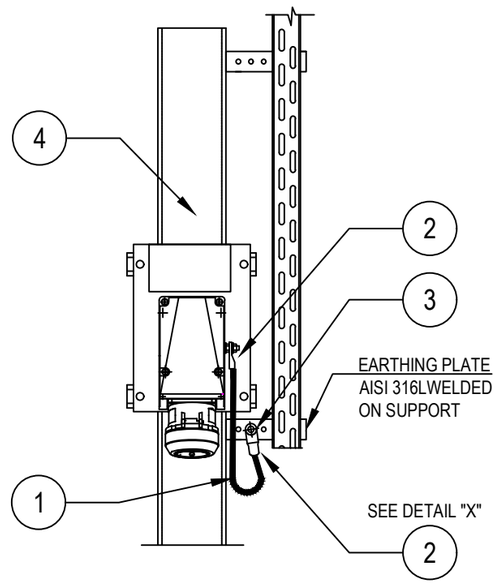
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

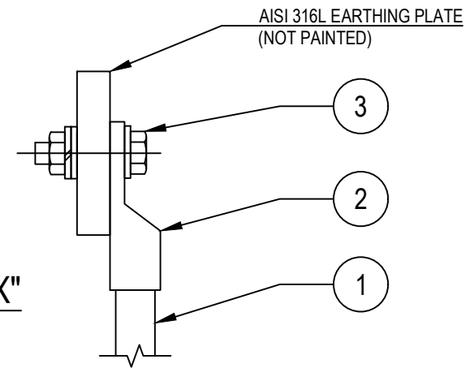
LIGHTING FIXTURE/GENERAL ITEM ON POLE



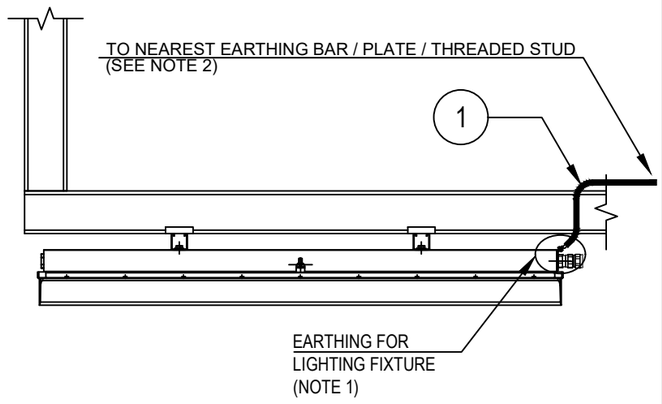
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

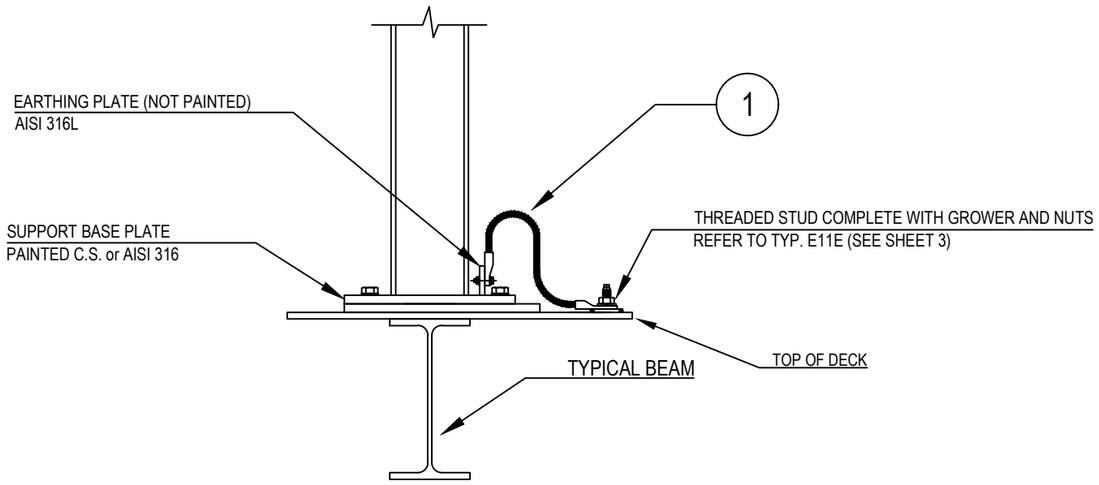
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

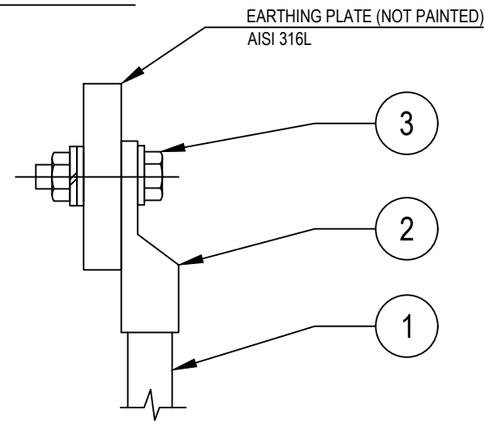
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

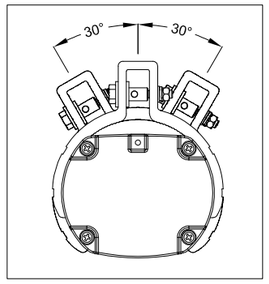
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

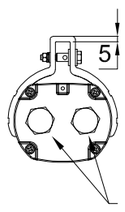
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

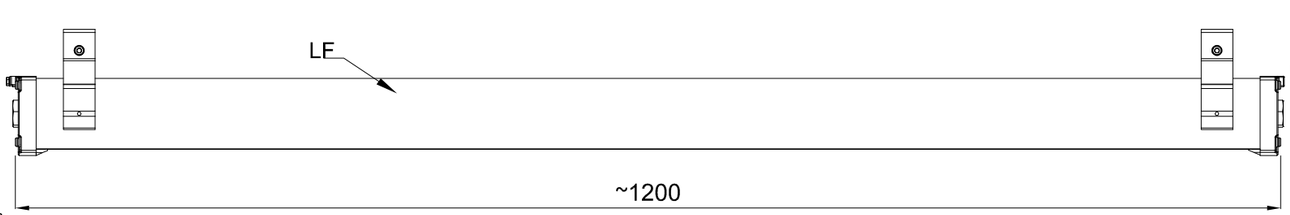
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

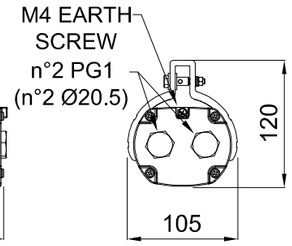


n°2 PG1
(n°2 Ø20.5)

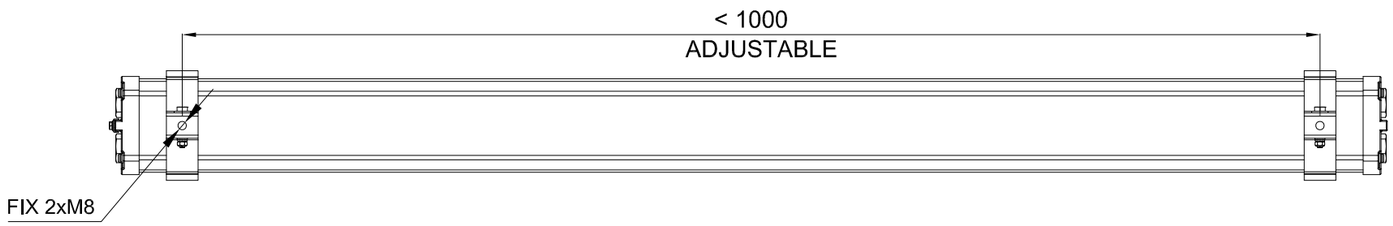
FRONT SIDE



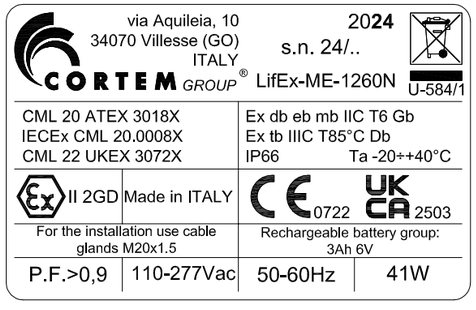
RIGHT SIDE (IN)



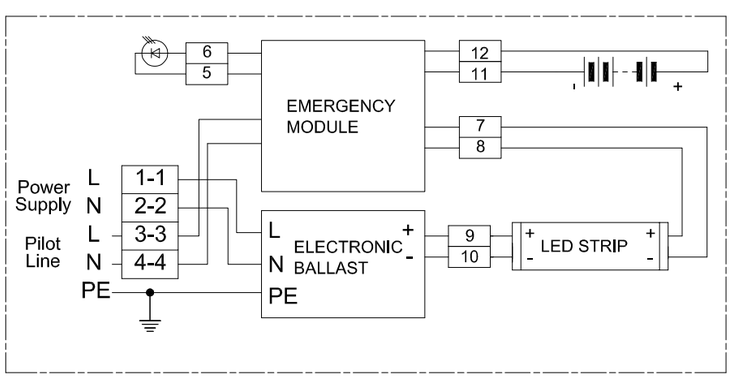
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

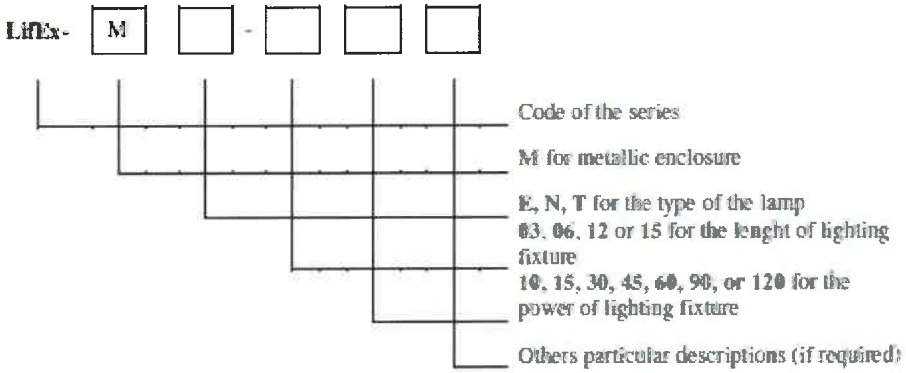
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

ITEM	Tag	ELF-200N1-08-L1-14 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001690	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T5	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	see PL: C30002262
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	PL	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	OK	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	OK	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-14	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001690		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-14	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001690		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

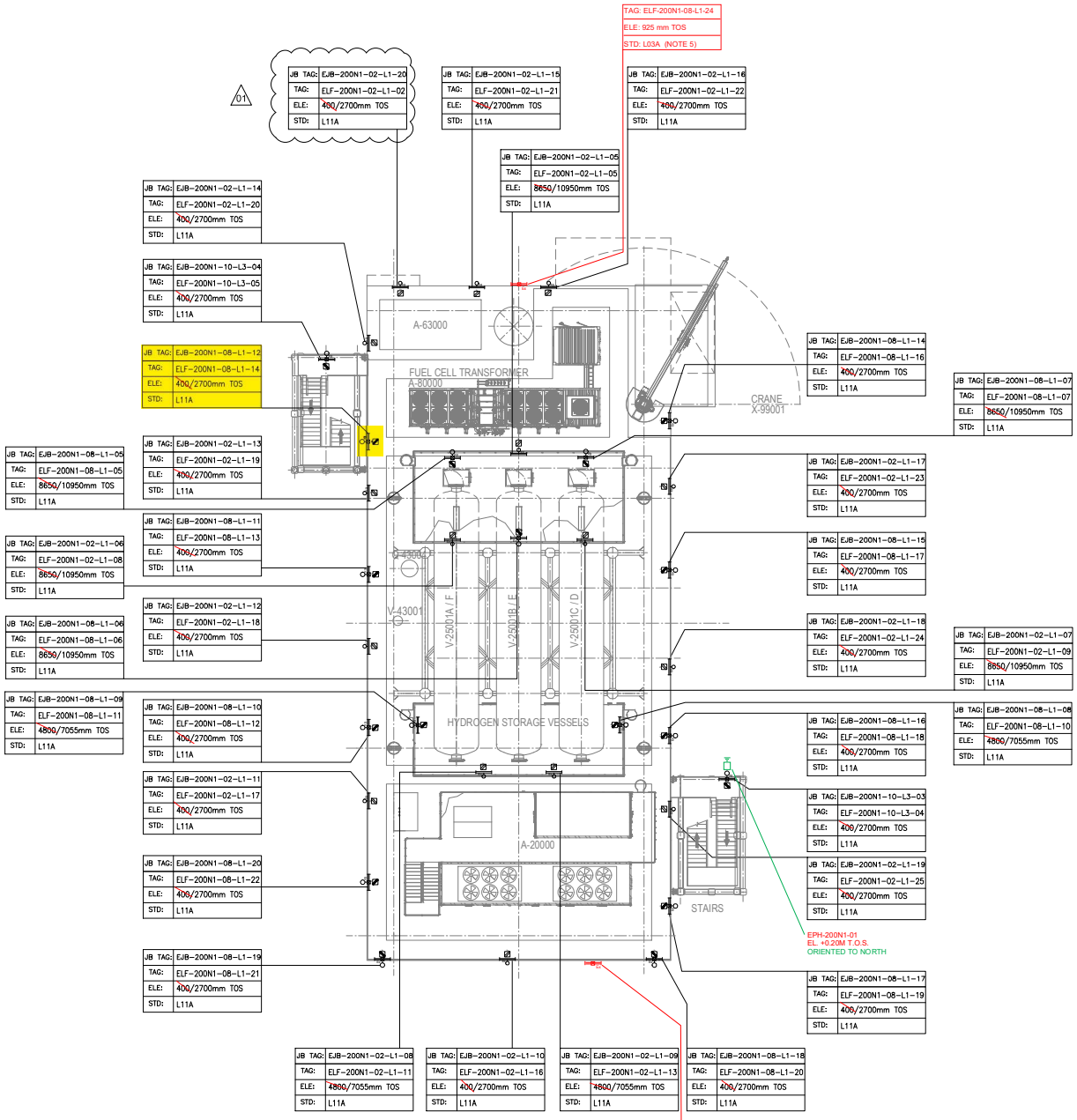
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

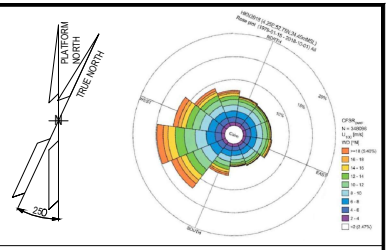
Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-11	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T15:29:37.226Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T11:11:08.052Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

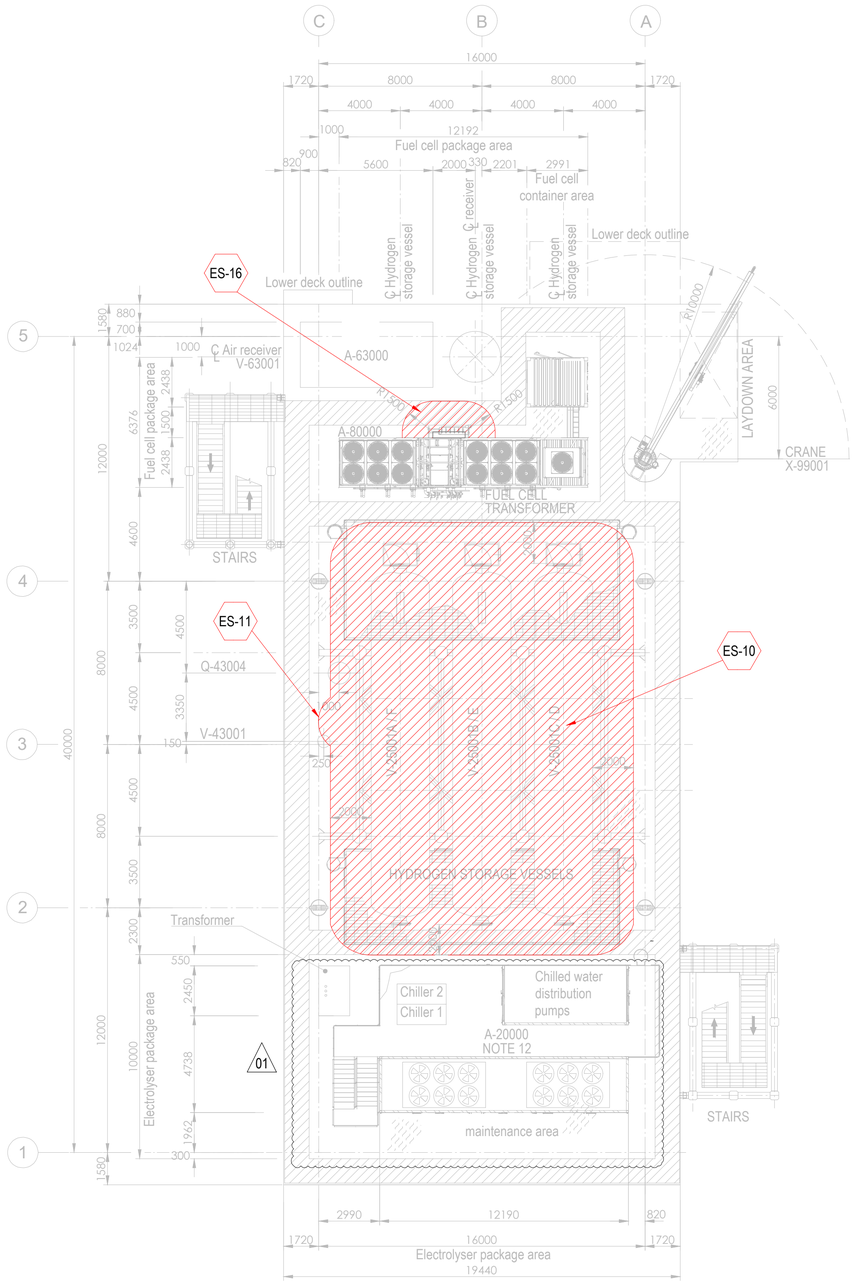
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

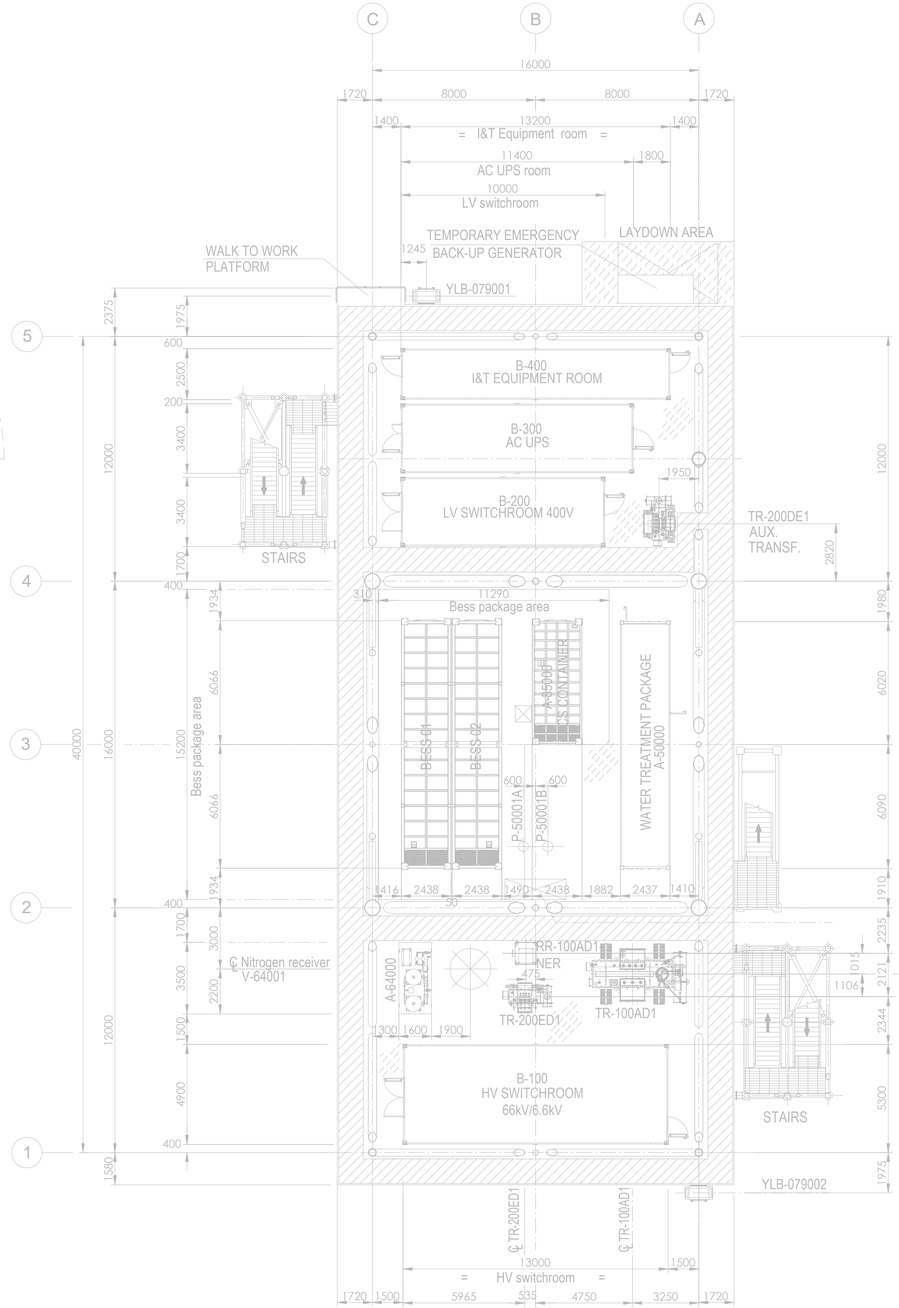
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REV. 01



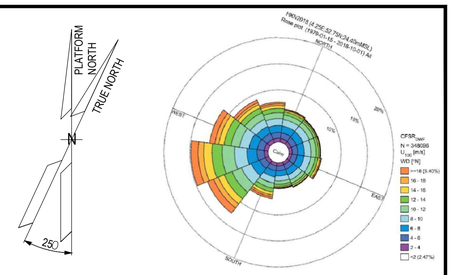
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

01

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

01

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

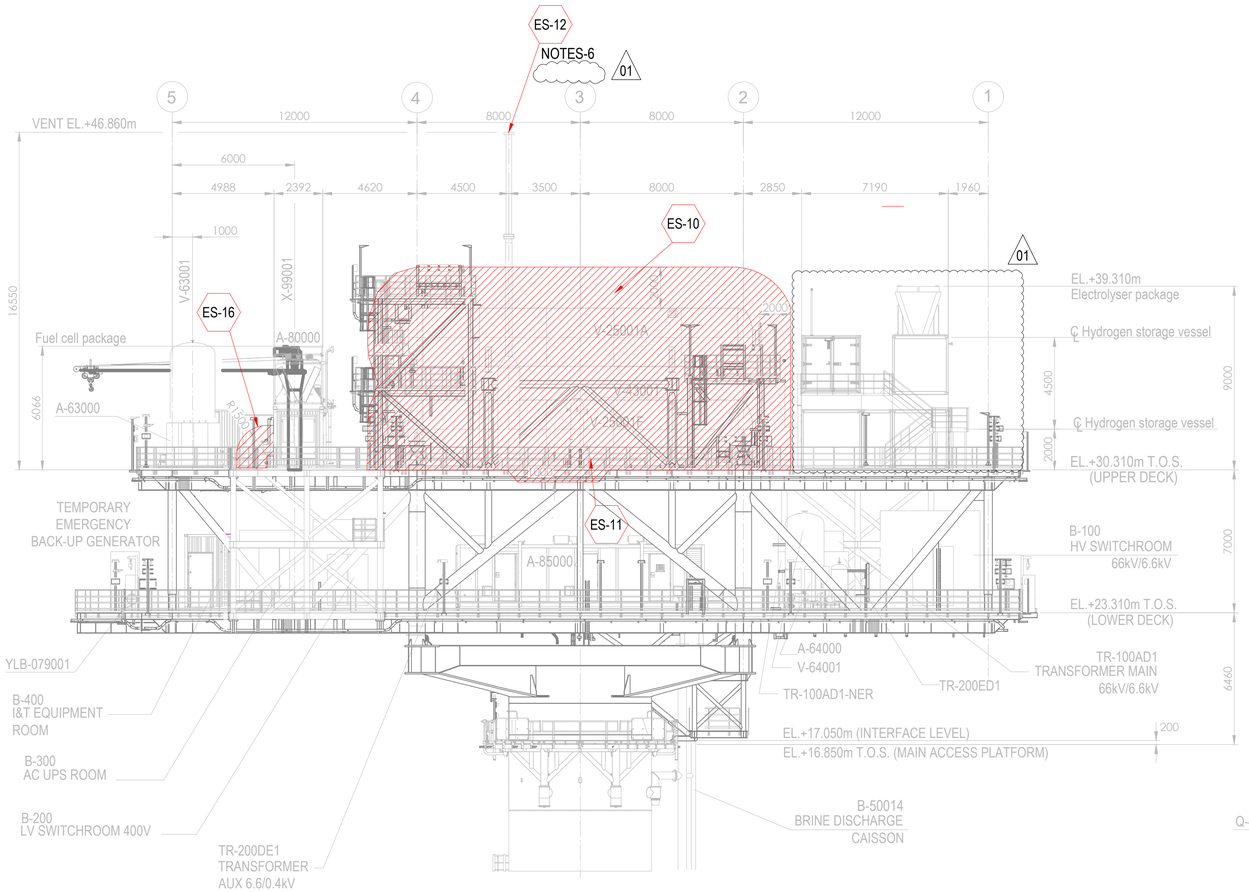
TITLE : BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30022	SHEET 001	REV. 01

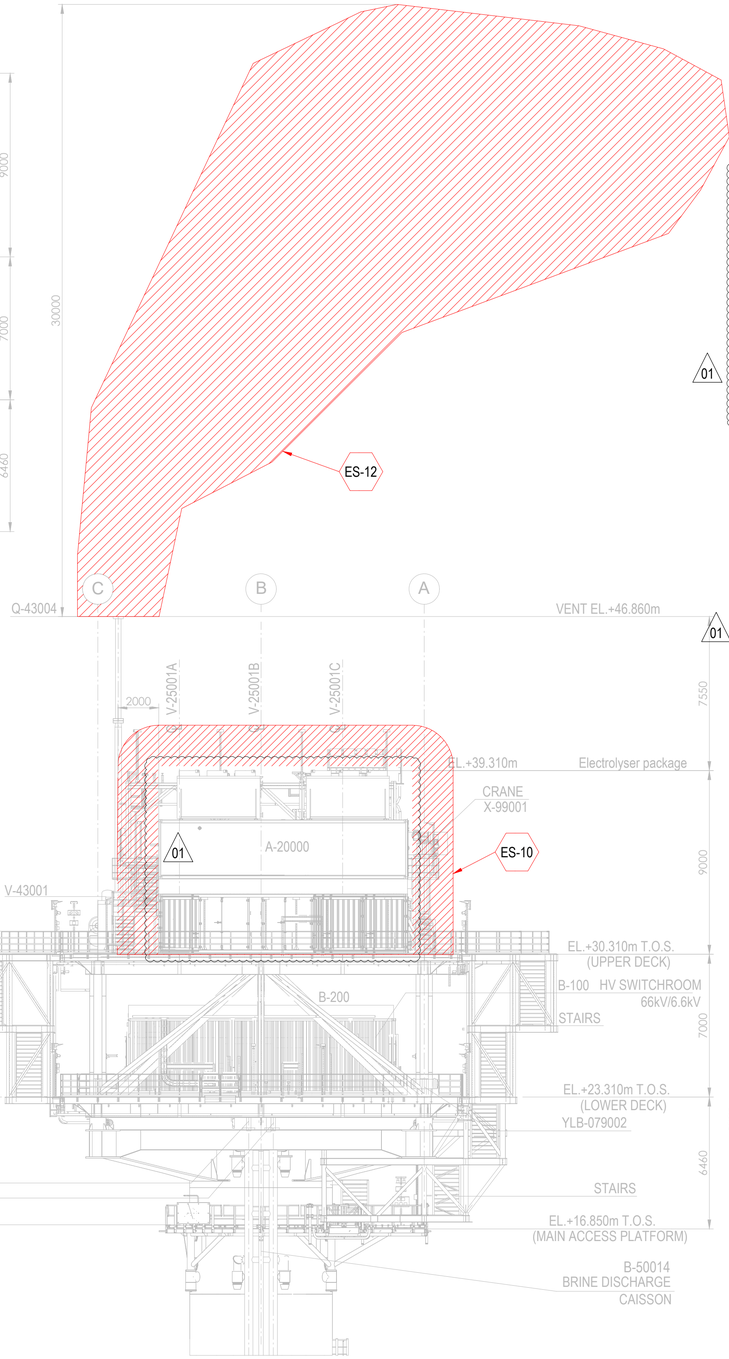
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 01



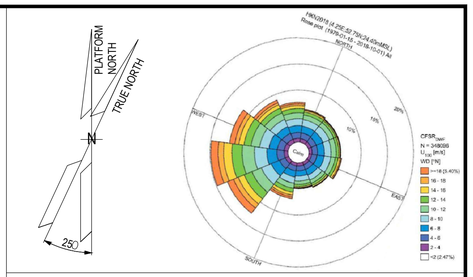
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

01

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. (ES12) IS SHOWN ONLY ON ELEVATION LOOKING NORTH ON THIS LAYOUT
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

01

LEGEND

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30024	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30024 Rev.01

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. — ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. — ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. — EJB-200N1-08-L1-01 — TYPE: L21E1
  - P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. — ELF-200N1-08-L1-01
  - P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. — ELF-200N1-08-L1-02
  - P-EJB-200N1-08-L1-07 — 4G4_E Arm. — EJB-200N1-08-L1-07 — TYPE: L21E1
    - P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. — ELF-200N1-08-L1-03
    - P-EJB-200N1-08-L1-06 — 4G4_E Arm. — EJB-200N1-08-L1-06 — TYPE: L21E1
      - P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. — ELF-200N1-08-L1-06
    - P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. — ELF-200N1-08-L1-07
    - P-EJB-200N1-08-L1-05 — 4G4_E Arm. — EJB-200N1-08-L1-05 — TYPE: L21E1
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  - P-EJB-200N1-08-L1-03 — 4G4_E Arm. — EJB-200N1-08-L1-03 — TYPE: L21E1
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      - P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. — ELF-200N1-08-L1-09
    - P-EJB-200N1-08-L1-12 — 4G4_E Arm. — EJB-200N1-08-L1-12 — TYPE: L21E1
      - P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. — ELF-200N1-08-L1-14
      - P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. — ELF-200N1-08-L1-24
      - P-EJB-200N1-08-L1-11 — 4G4_E Arm. — EJB-200N1-08-L1-11 — TYPE: L21E1
        - P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. — ELF-200N1-08-L1-13
        - P-EJB-200N1-08-L1-10 — 4G4_E Arm. — EJB-200N1-08-L1-10 — TYPE: L21E1
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          - P-EJB-200N1-08-L1-20 — 4G4_E Arm. — EJB-200N1-08-L1-20 — TYPE: L21E1
            - P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. — ELF-200N1-08-L1-22
  - P-EJB-200N1-08-L1-15 — 4G4_E Arm. — EJB-200N1-08-L1-15 — TYPE: L21E1
    - P-EJB-200N1-08-L1-17 — 4G4_E Arm. — EJB-200N1-08-L1-17 — TYPE: L21E1
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          - P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. — ELF-200N1-08-L1-25
          - P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. — ELF-200N1-08-L1-21
    - P-EJB-200N1-08-L1-14 — 4G4_E Arm. — EJB-200N1-08-L1-14 — TYPE: L21E1
      - P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. — ELF-200N1-08-L1-17
      - P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. — ELF-200N1-08-L1-16

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20125

SHEET 011

REV. 01

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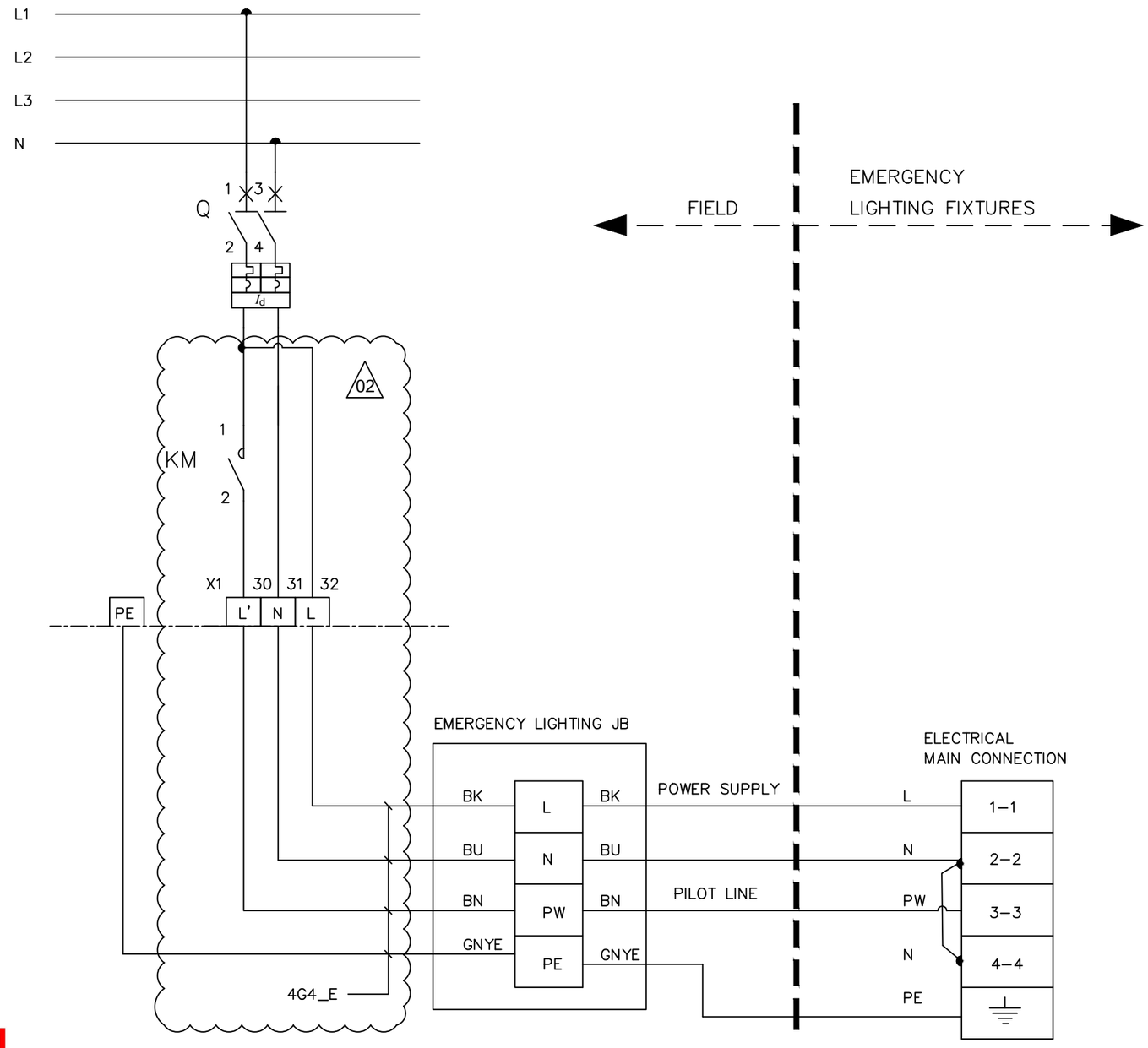
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DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

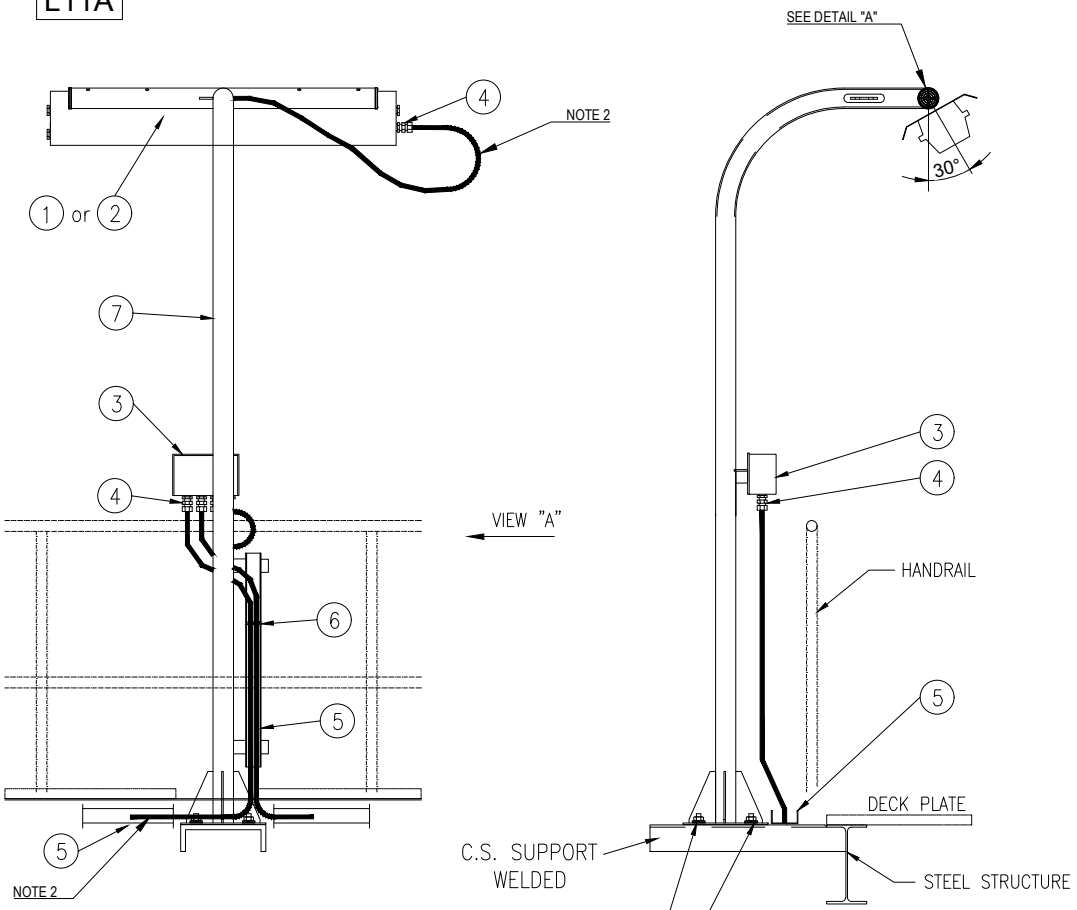
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REV. 02

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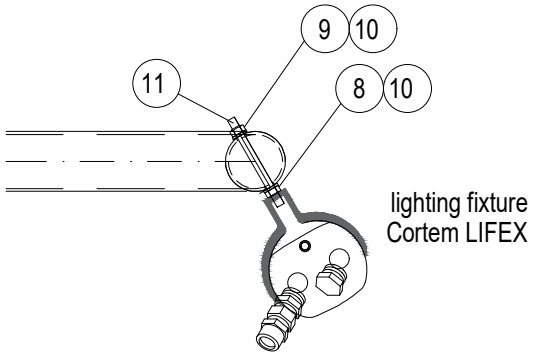
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L11A



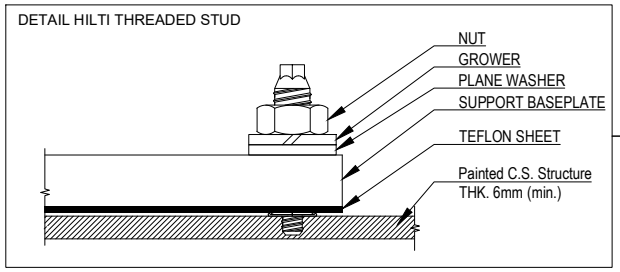
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

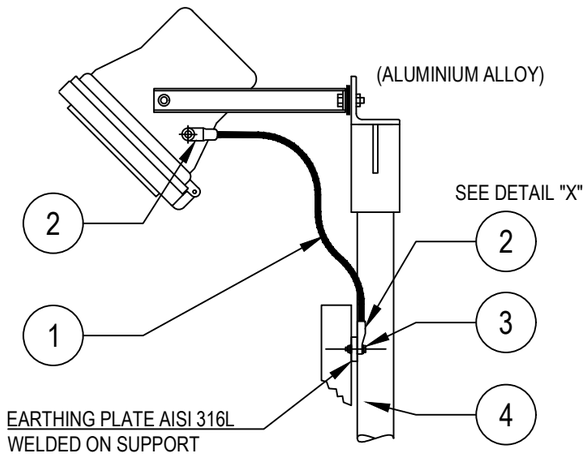
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

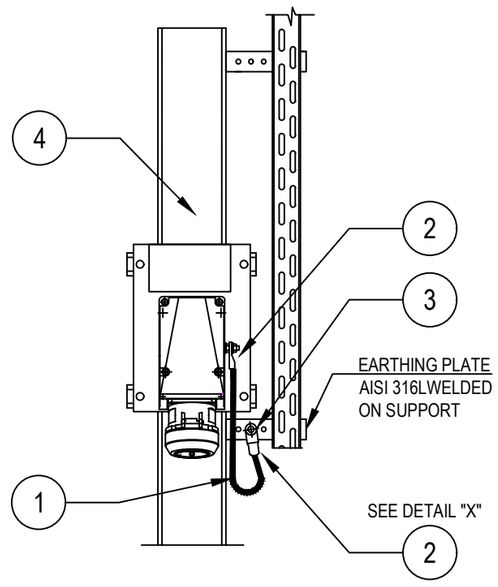
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

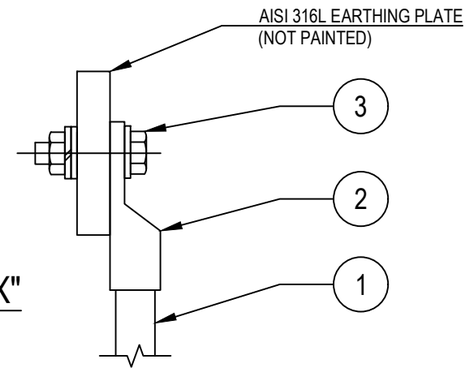
LIGHTING FIXTURE/GENERAL ITEM ON POLE



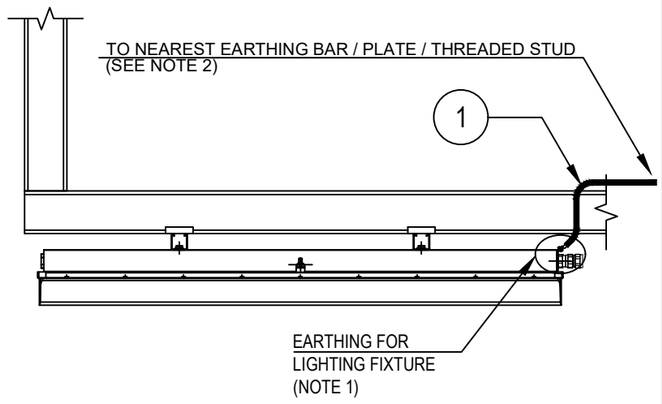
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

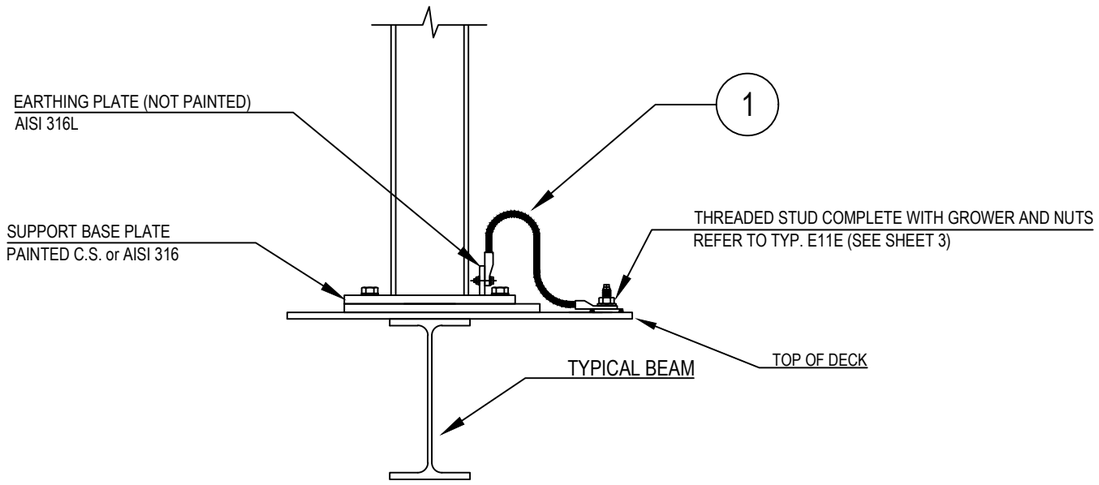
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

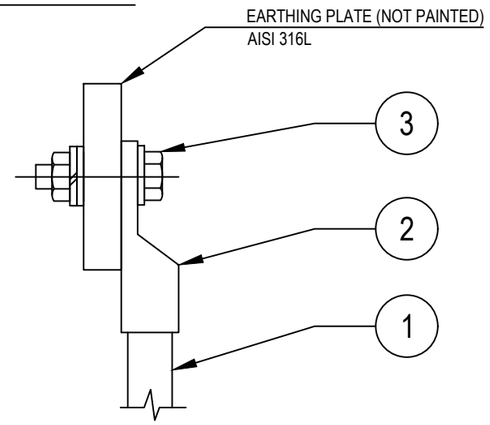
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

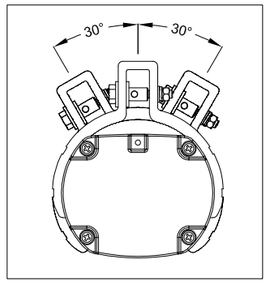
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

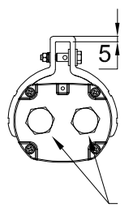
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

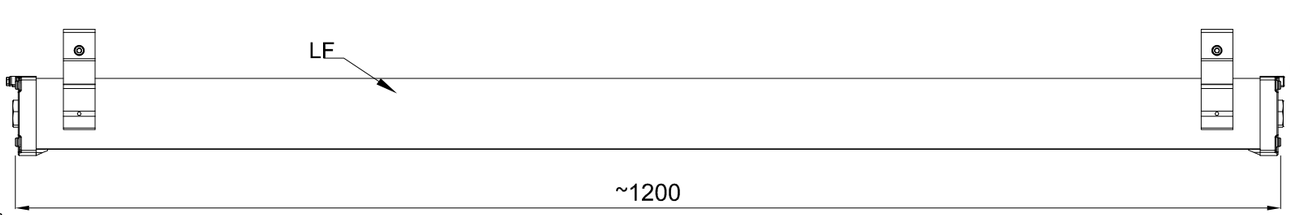
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

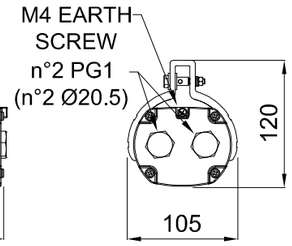


n°2 PG1
(n°2 Ø20.5)

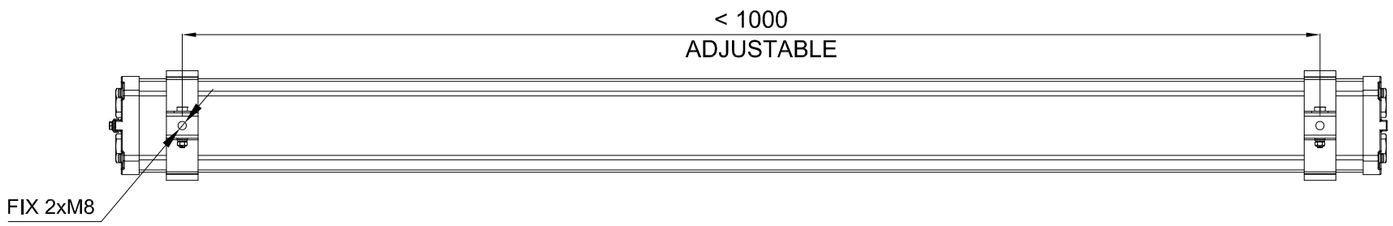
FRONT SIDE



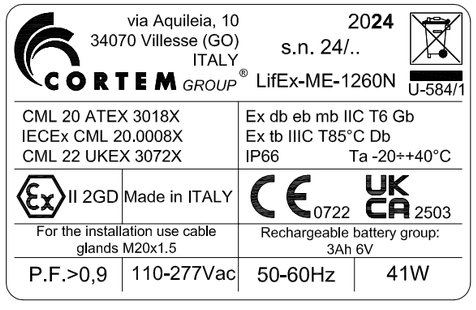
RIGHT SIDE (IN)



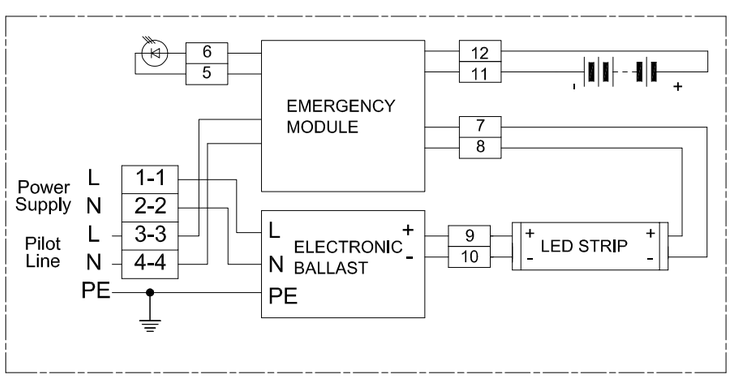
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

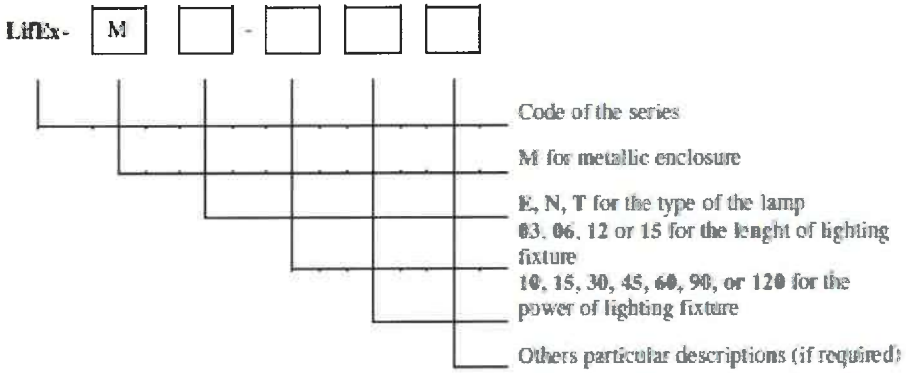
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

ITEM	Tag	ELF-200N1-08-L1-17 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001691	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T4	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	OK	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-17	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001691		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-17	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001691		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	

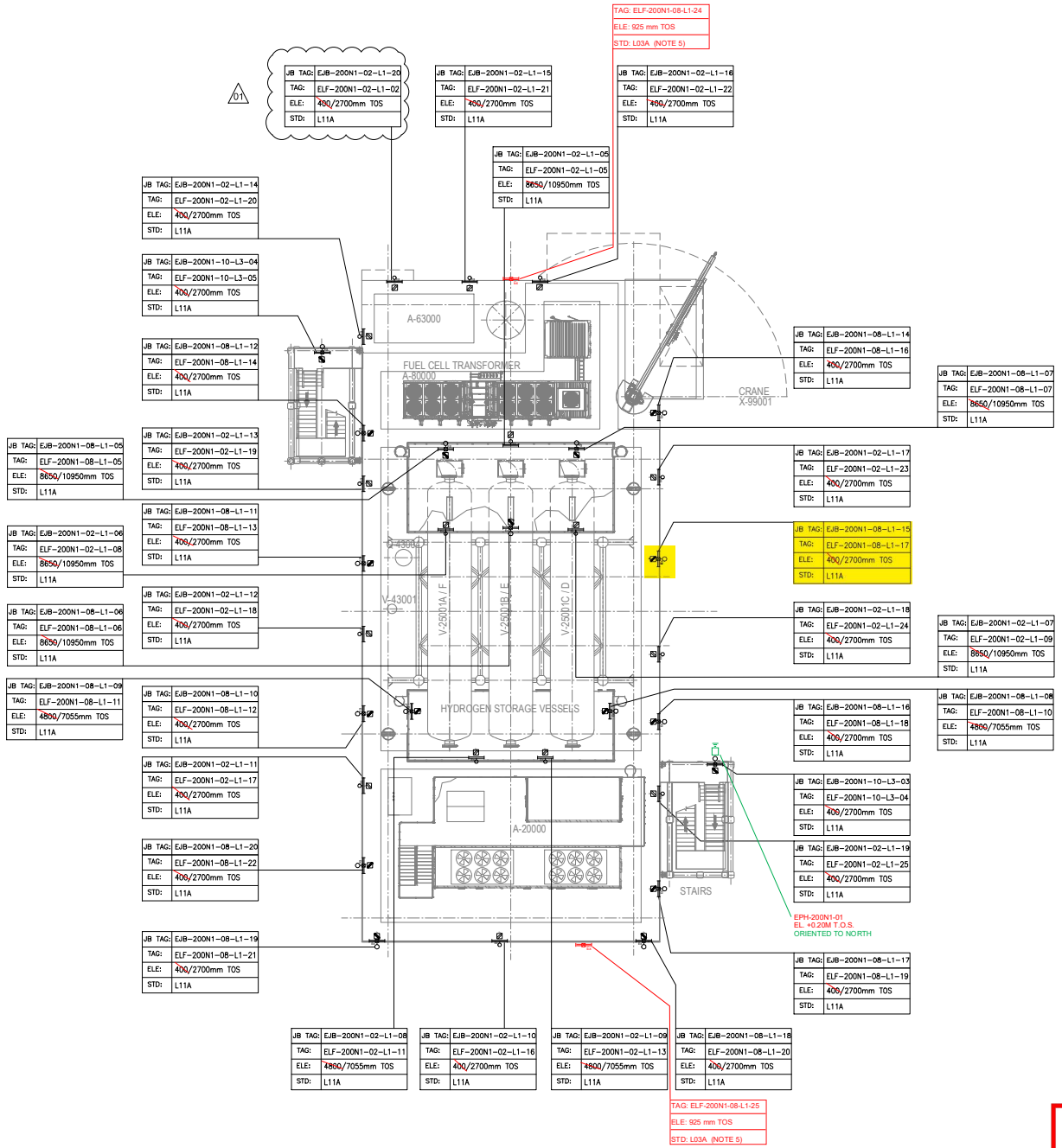
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

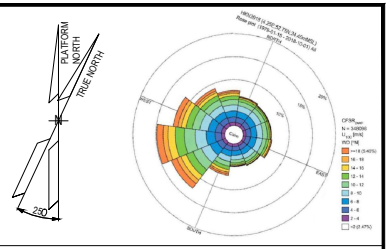
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-11	2025-01-22	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T15:29:50.048Z	PROVERLIS Digitaly signed by Andrea Andreani 2025-01-22T17:10:18.386Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

File Name : 123A90-DDL-EL-DL-20118

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1
- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm.

EJB-200N1-08-L1-01 — TYPE: L21E1
- P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
- P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
- P-EJB-200N1-08-L1-07 — 4G4_E Arm.

EJB-200N1-08-L1-07 — TYPE: L21E1
- P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
- P-EJB-200N1-08-L1-06 — 4G4_E Arm.

EJB-200N1-08-L1-06 — TYPE: L21E1
- P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06
- P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07

P-EJB-200N1-08-L1-03 — 4G4_E Arm.

EJB-200N1-08-L1-05 — TYPE: L21E1
- P-EJB-200N1-08-L1-05 — 4G4_E Arm.
- P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
- P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05

P-EJB-200N1-08-L1-16 — 4G4_E Arm.

EJB-200N1-08-L1-16 — TYPE: L21E1
- P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
- P-EJB-200N1-08-L1-17 — 4G4_E Arm.

EJB-200N1-08-L1-17 — TYPE: L21E1
- P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
- P-EJB-200N1-08-L1-18 — 4G4_E Arm.

EJB-200N1-08-L1-18 — TYPE: L21E1
- P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
- P-EJB-200N1-08-L1-19 — 4G4_E Arm.

EJB-200N1-08-L1-19 — TYPE: L21E1
- P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
- P-EJB-200N1-08-L1-15 — 4G4_E Arm.

EJB-200N1-08-L1-15 — TYPE: L21E1
- P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
- P-EJB-200N1-08-L1-14 — 4G4_E Arm.

EJB-200N1-08-L1-14 — TYPE: L21E1
- P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25

P-EJB-200N1-08-L1-12 — 4G4_E Arm.

EJB-200N1-08-L1-12 — TYPE: L21E1
- P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
- P-EJB-200N1-08-L1-11 — 4G4_E Arm.

P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24

EJB-200N1-08-L1-11 — TYPE: L21E1
- P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
- P-EJB-200N1-08-L1-10 — 4G4_E Arm.

EJB-200N1-08-L1-10 — TYPE: L21E1
- P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12
- P-EJB-200N1-08-L1-20 — 4G4_E Arm.

EJB-200N1-08-L1-20 — TYPE: L21E1
- P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22

EJB-200N1-08-L1-03 — TYPE: L21E1
- P-EJB-200N1-08-L1-09 — 4G4_E Arm.

EJB-200N1-08-L1-09 — TYPE: L21E1
- P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
- P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11

EJB-200N1-08-L1-08
- P-EJB-200N1-08-L1-08 — 4G4_E Arm.
- P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
- P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DG-20125 | SHEET 011 | REV. 01

F.to UNI A3: 420mmx297mm

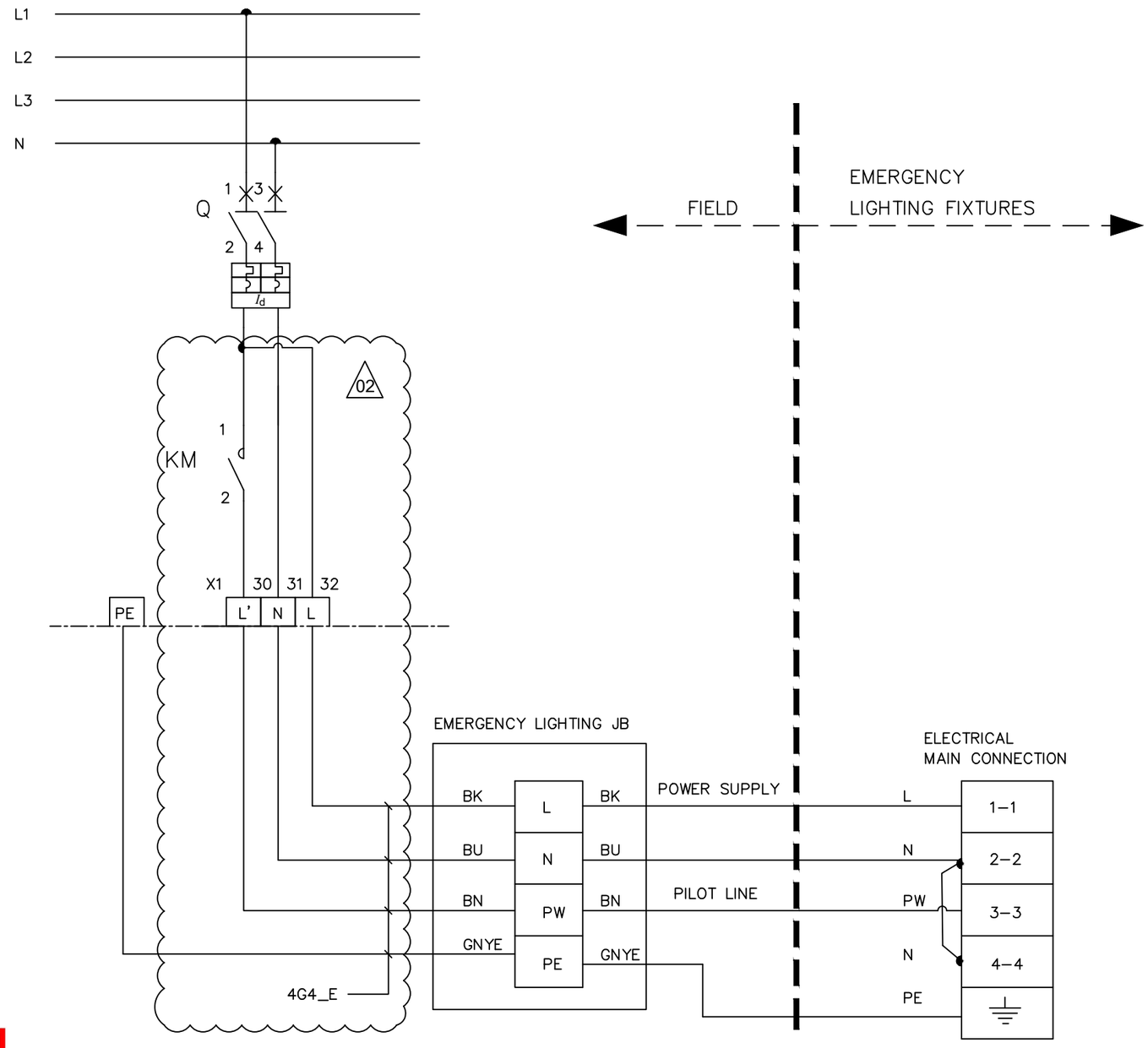
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

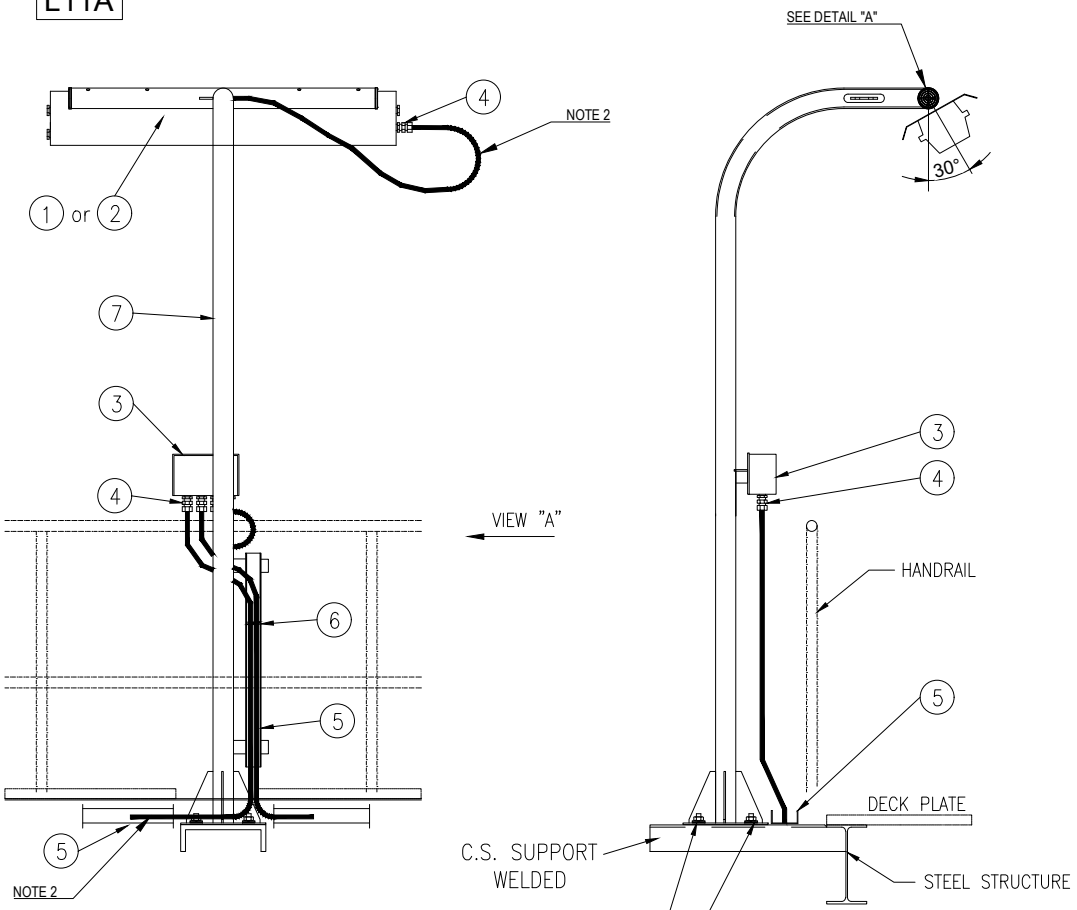
SHEET 014

REV. 02

F.to UNI A3: 420mmx297mm

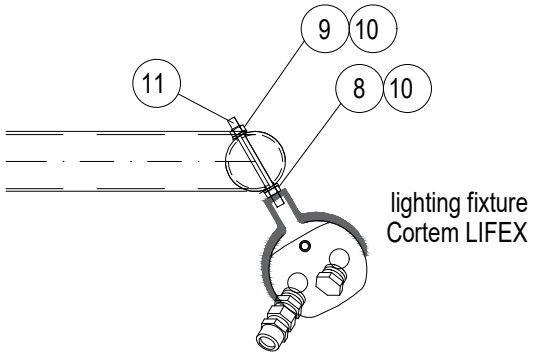
File Name : 123A90–DDL–EL–DG–20125

L11A



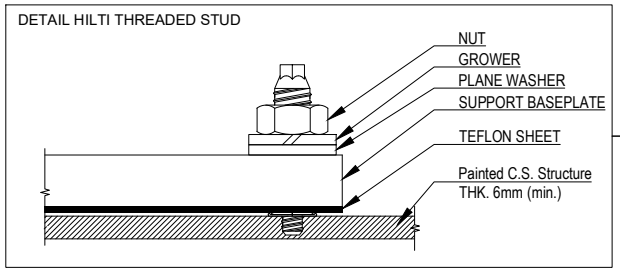
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

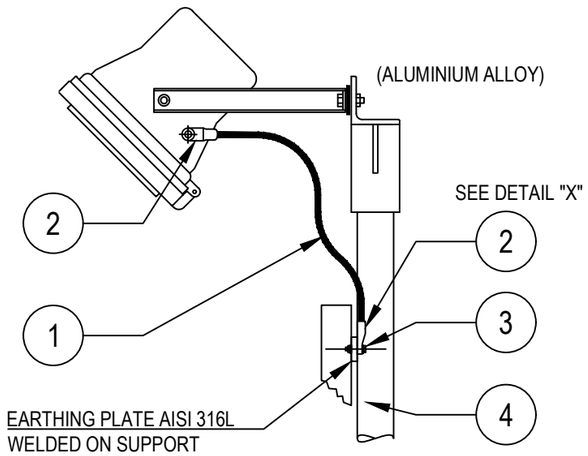
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

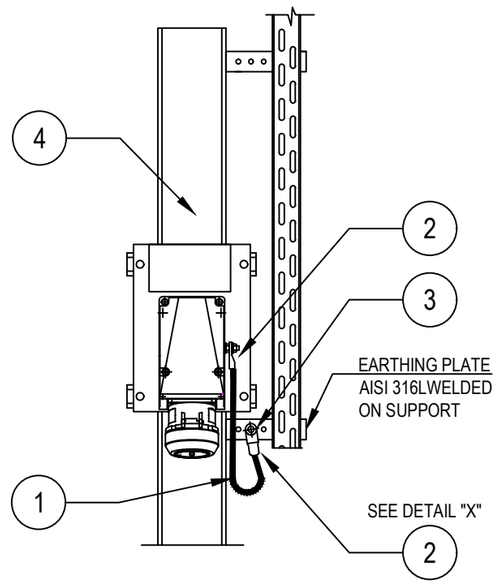
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

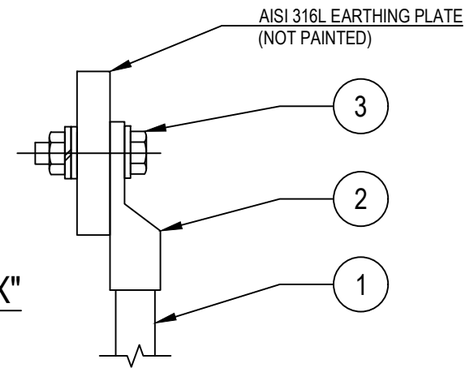
LIGHTING FIXTURE/GENERAL ITEM ON POLE



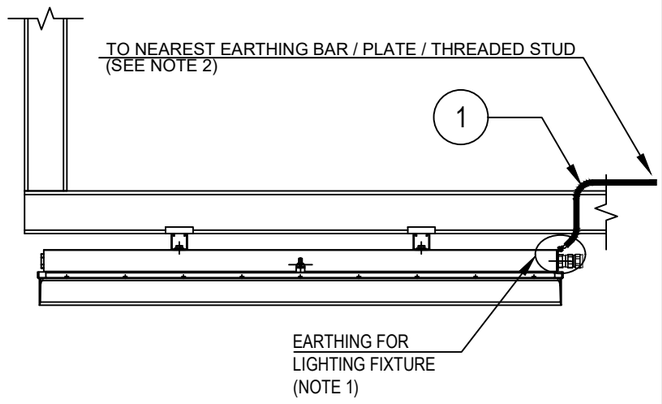
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

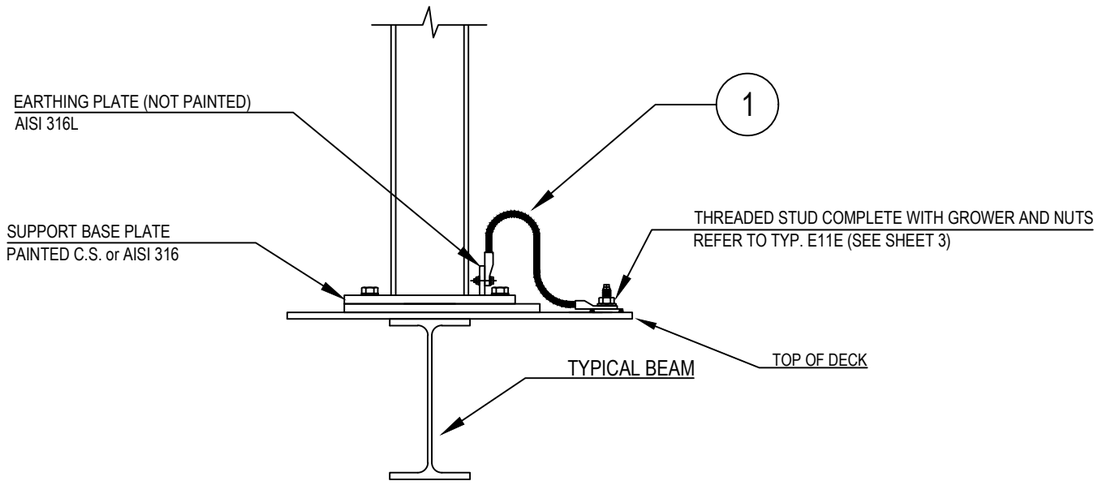
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

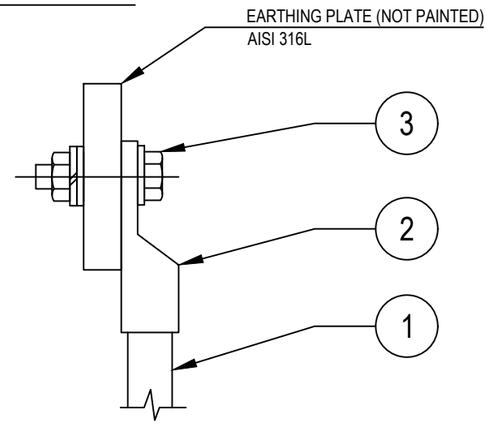
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

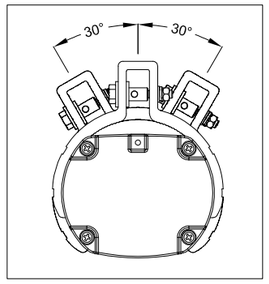
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

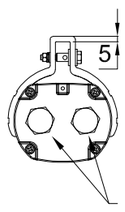
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

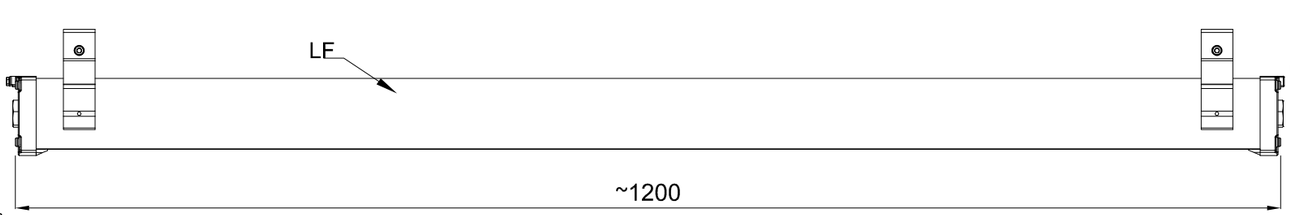
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

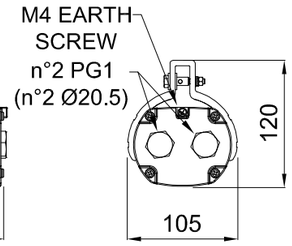


n°2 PG1
(n°2 Ø20.5)

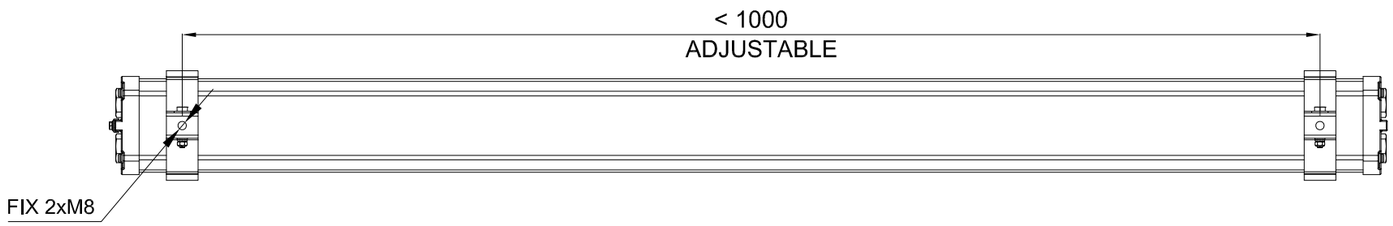
FRONT SIDE



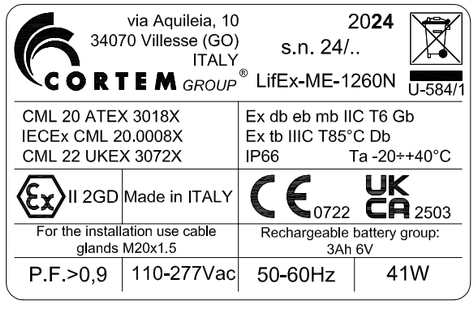
RIGHT SIDE (IN)



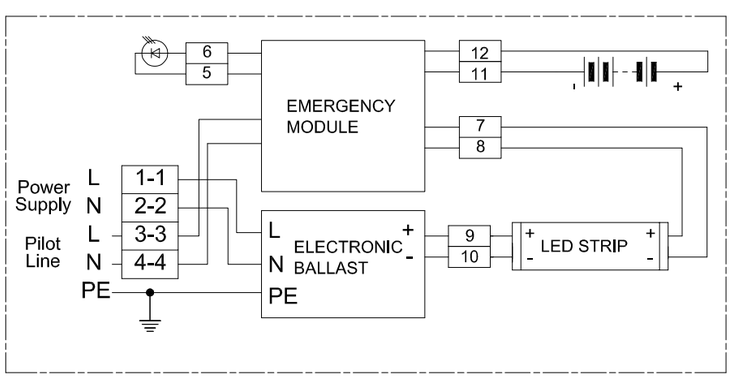
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S
AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

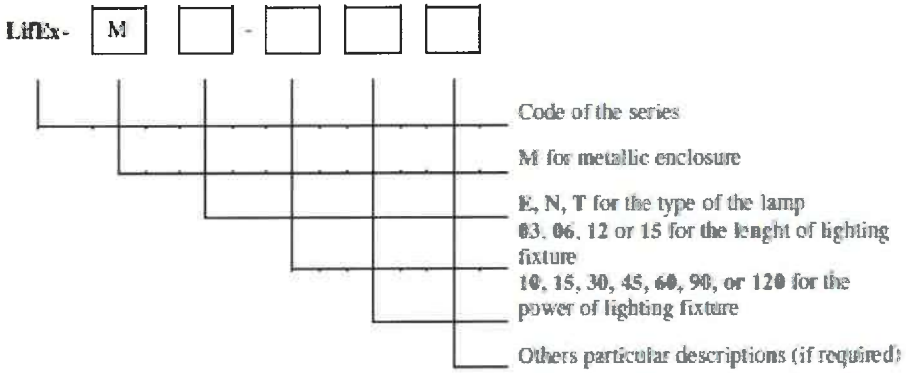
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

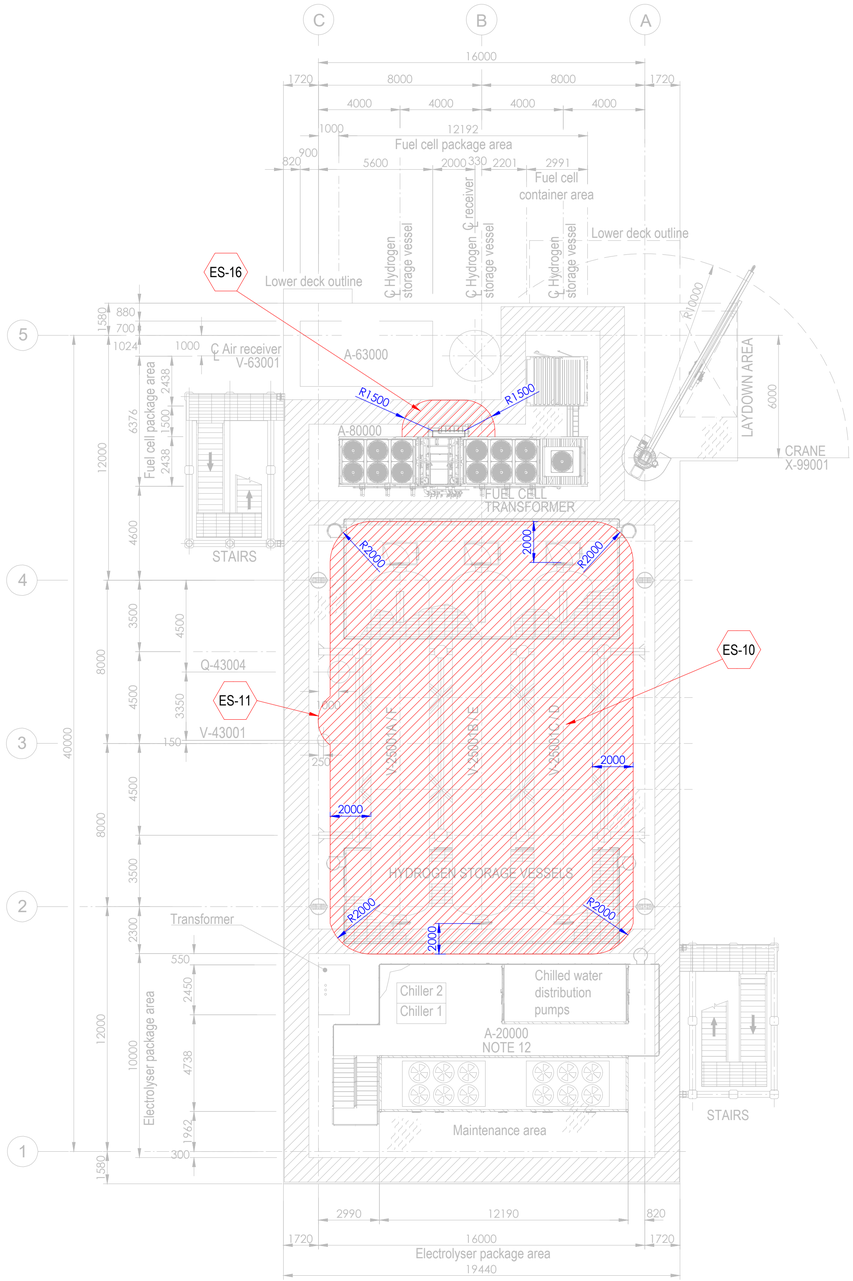
Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

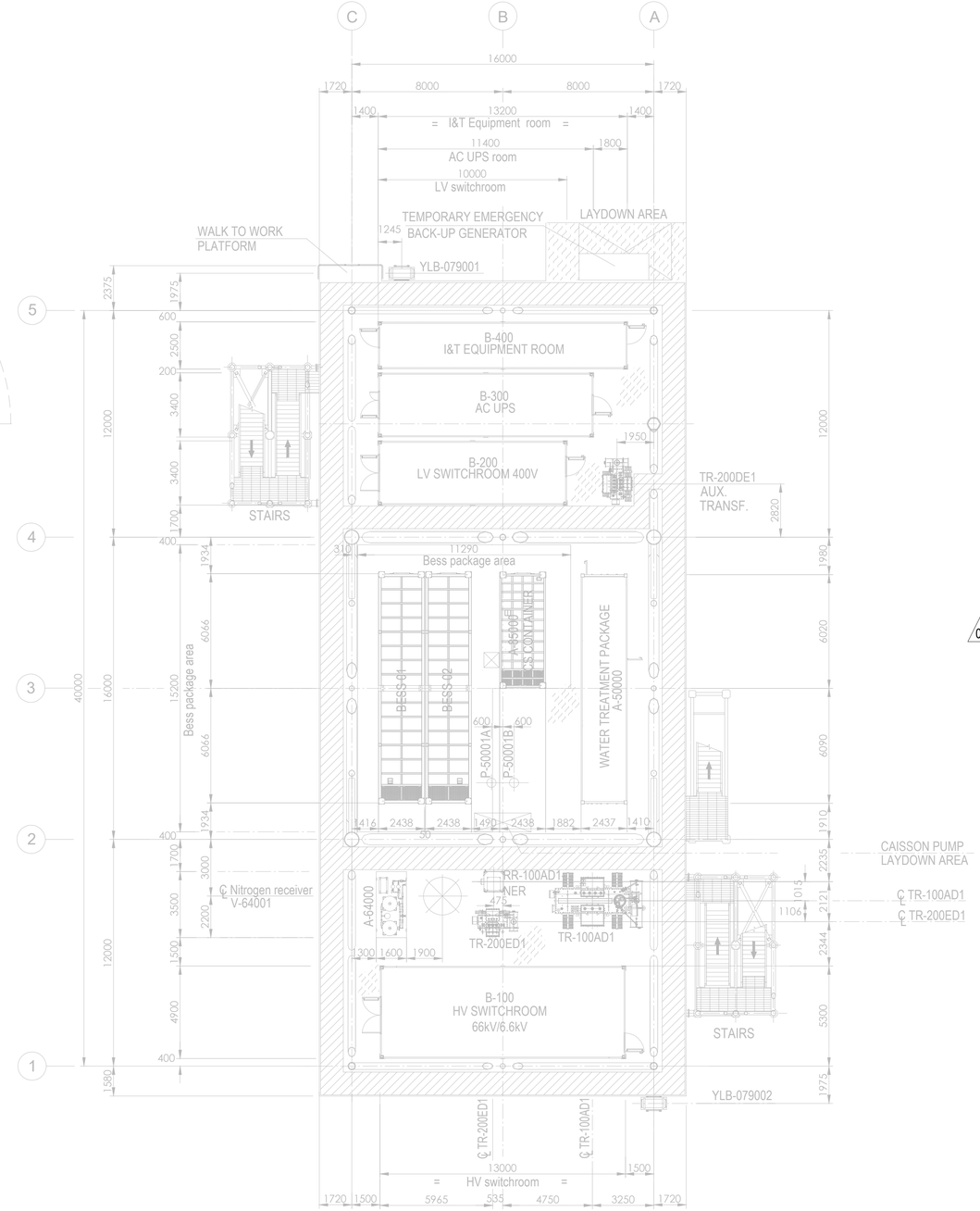
Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



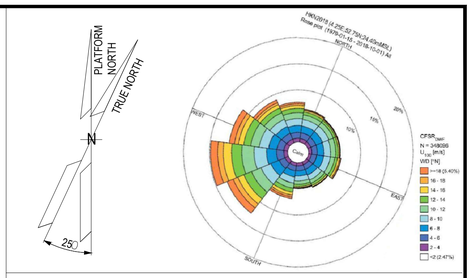
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

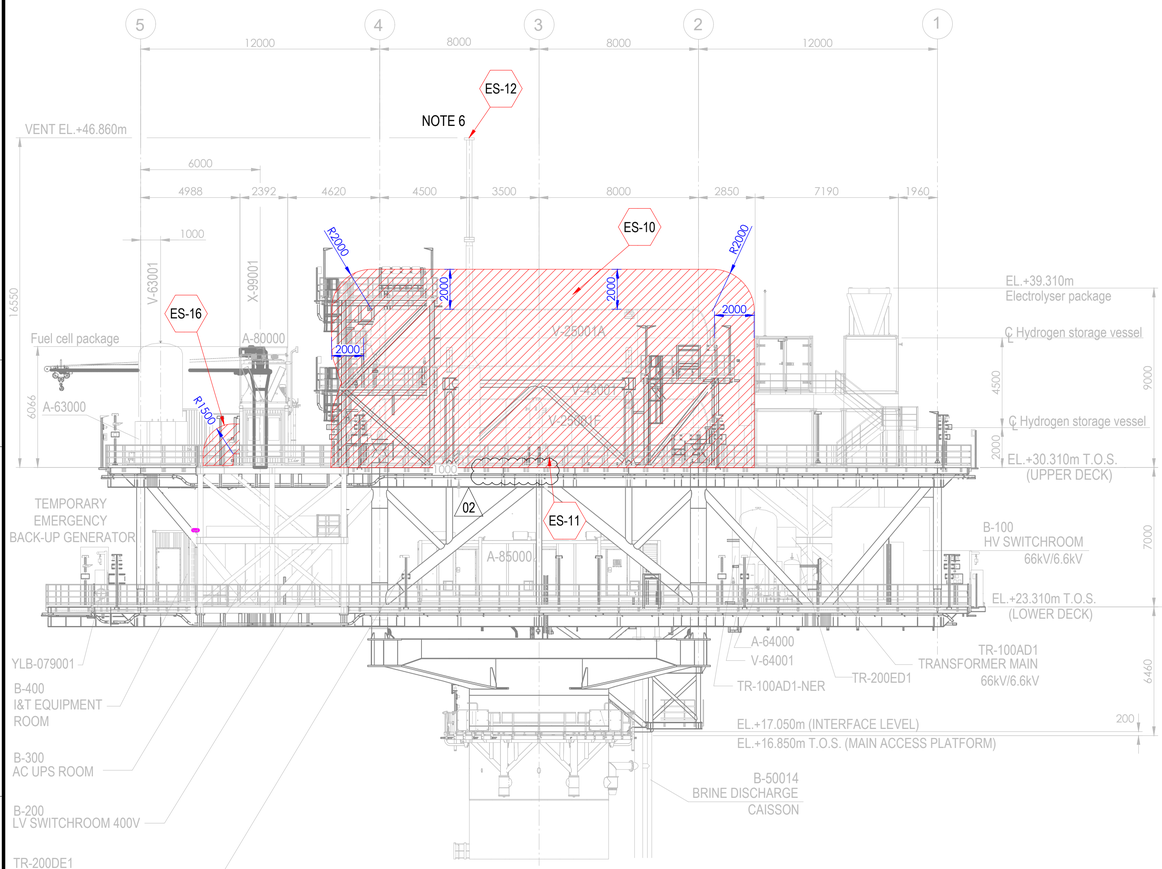
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

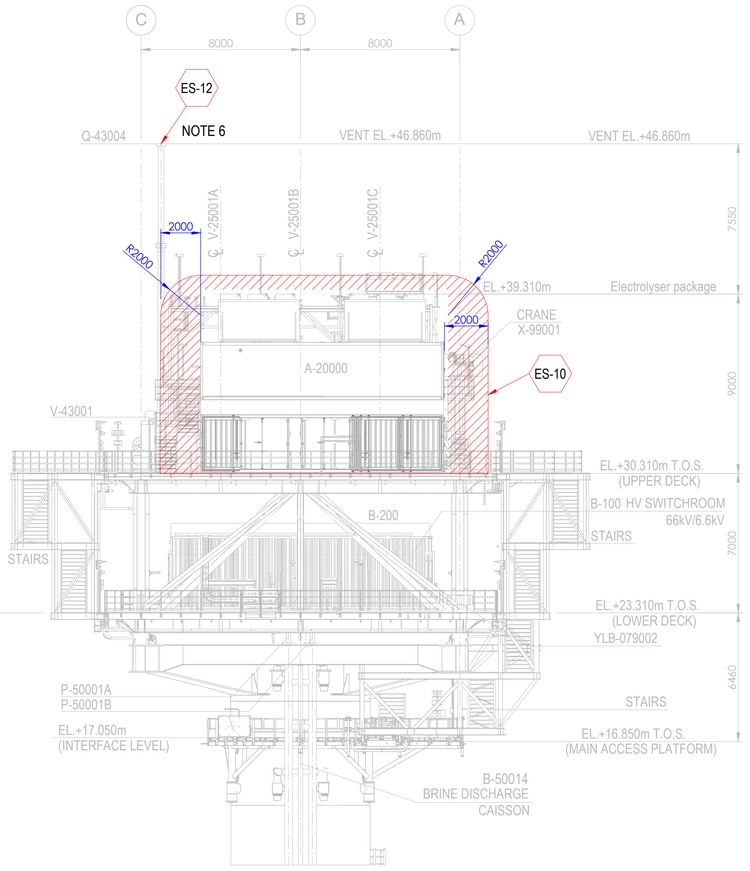
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

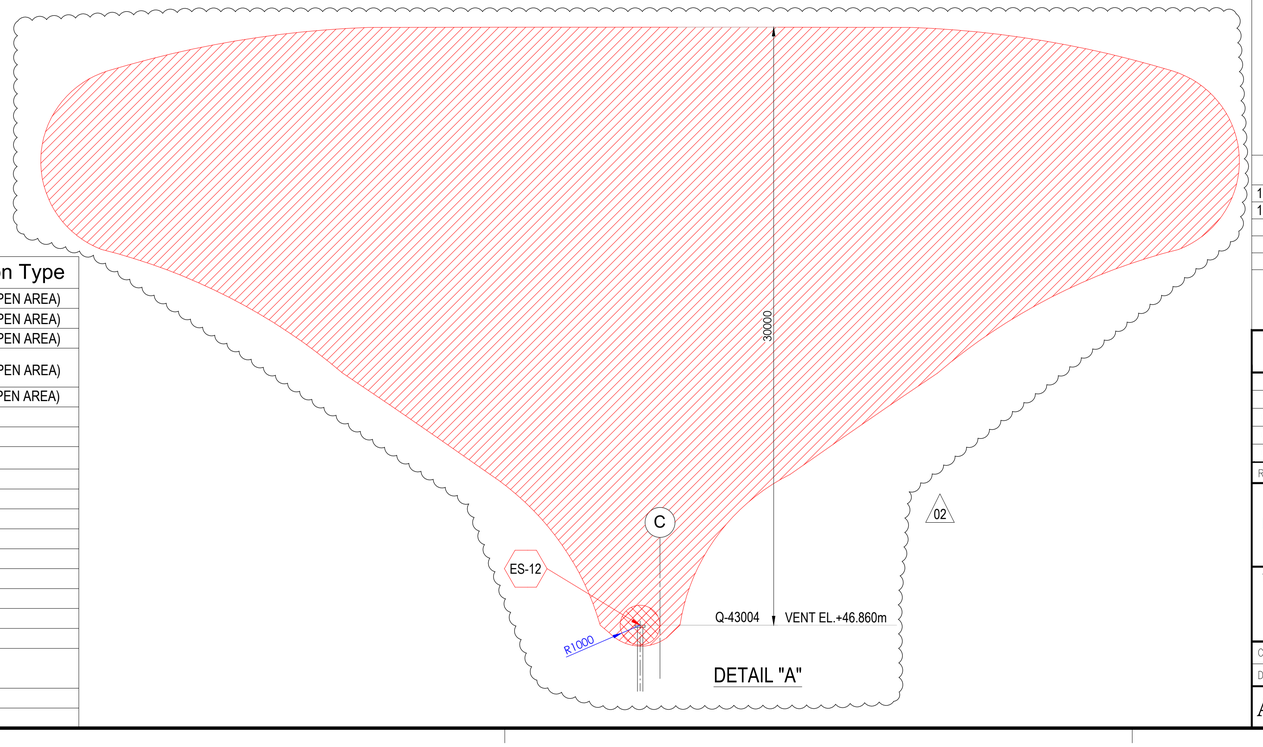


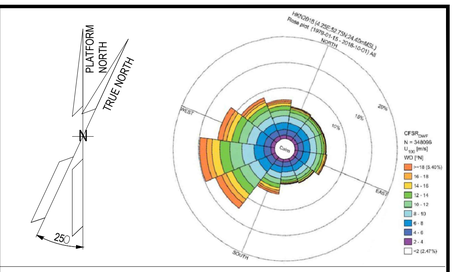
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
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07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

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2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	ELF-200N1-08-L1-18 : EMERGENCY LIGHT		Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35 : Emergency Lighting Upper Deck		Module	UD
TASK	code	C10001692	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	24/86773				
Manufacturer	Cortem Spa			**Model**	LIFEX-ME-1260N-BB				
Cert No.	CML 20 ATEX 3018X			**Equipment Ambient Temp.**	-20°C to +60°C				
Area Classification	hazardous	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T5	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	PL	.
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	OK	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	OK	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	OK	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	OK	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	ELF-200N1-08-L1-18	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001692		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	.
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	PL	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	ELF-200N1-08-L1-18	: EMERGENCY LIGHT			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	83-35	: Emergency Lighting Upper Deck			Module	UD
TASK	code	C10001692		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

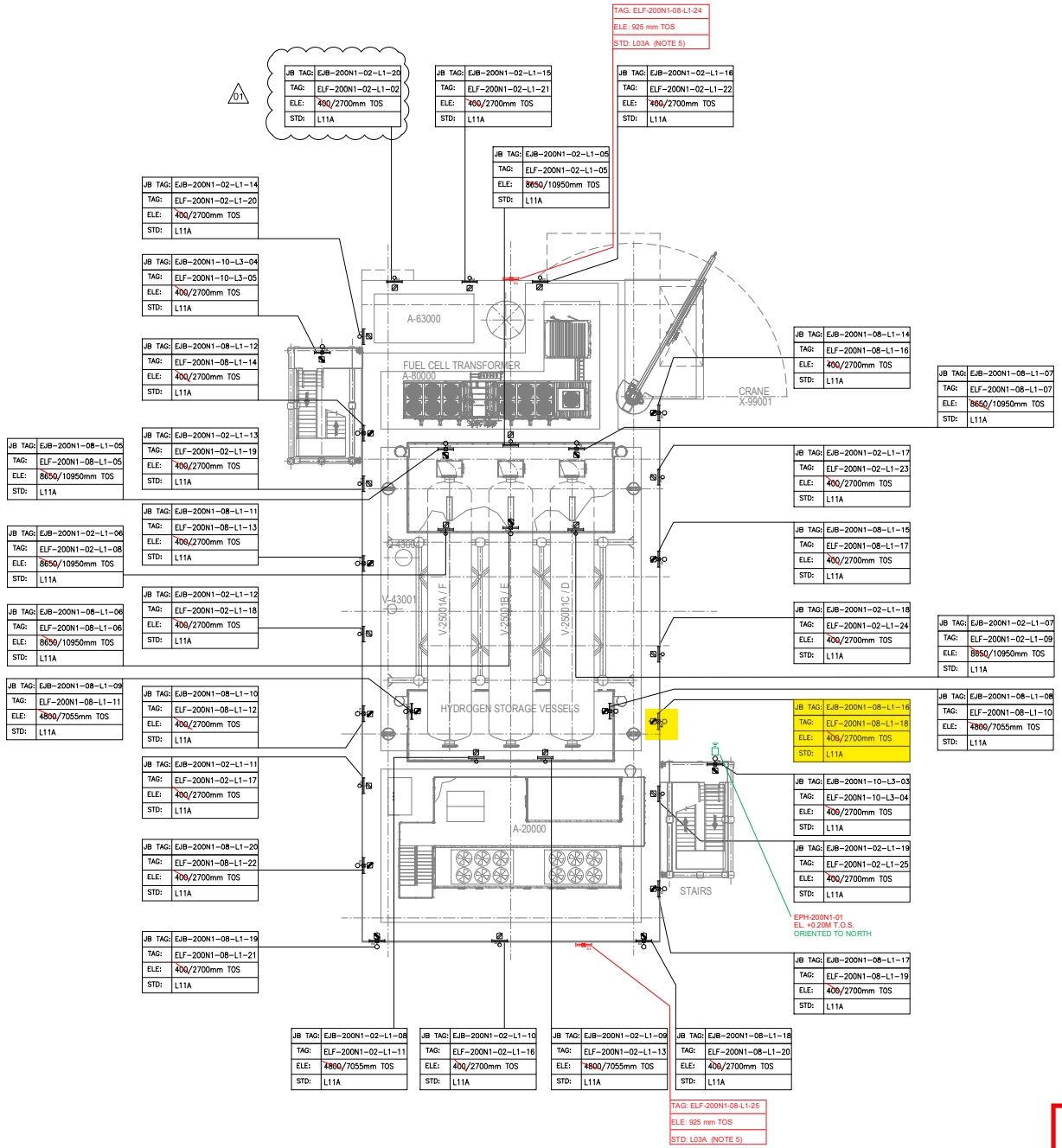
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Andrea Andreani	
Date	2024-12-11	2024-12-31	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T15:30:03.182Z	PROVERLIS Digitaly signed by Andrea Andreani 2024-12-31T10:28:01.848Z	

DRAWING NO. 123A90-DDL-EL-DL-20118

REV. 01

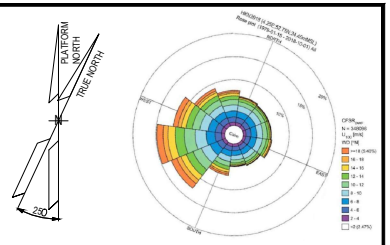


PLAN ON UPPER DECK
EL+30.310 T.O.S.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20118**

REV.:	DATE:	SIGNATURE:
1_F	26/11/24	G.Randi

ROSETTI MARINO SpA



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. ELEVATION OF THE LAMPS ARE REFFERED TO THE BOTTOM OF THE LAMP.
4. FOR THE ELEVATION OF JB, REFER TO THE TYPICAL INSTALLATION.
5. FOR ELF-200N1-08-L1-24 AND ELF-200N1-08-L1-25 CONSTRUCTION DETAILS REFER TO DOC. 123A90-DDL-ST-DD-90076

LEGEND

- EMERGENCY LIGHTING JB
- 60W LED EMERGENCY LUMINARIES
- 60W LED EMERGENCY LUMINARIES FIXTURE POLE MOUNTED
- NORMAL LIGHTING JB
- 45W LED NORMAL LUMINARIES
- 45W LED NORMAL LUMINARIES FIXTURE POLE MOUNTED
- WELDING SOCKET WITH INTEGRATED JB
- SMALL POWER SOCKET WITH INTEGRATED JB
- TWILIGHT RELAY SENSOR

JB TAG: — JB-TAG
TAG: — TAG
ELE: — ELEVATION
STD: — STANDARD

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20091	ELECTRICAL TYPICAL INSTALLATION DETAILS - LIGHTING SYSTEM
123A90-DDL-EL-DD-20092	ELECTRICAL TYPICAL INSTALLATION DETAILS - POWER SYSTEM & CABLE INSTALLATION
123A90-DDL-EL-RE-20153	LIGHTING CALCULATION STUDY REPORT
123A90-DDL-ST-DD-90076	IDENTIFICATION PANELS ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/05/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

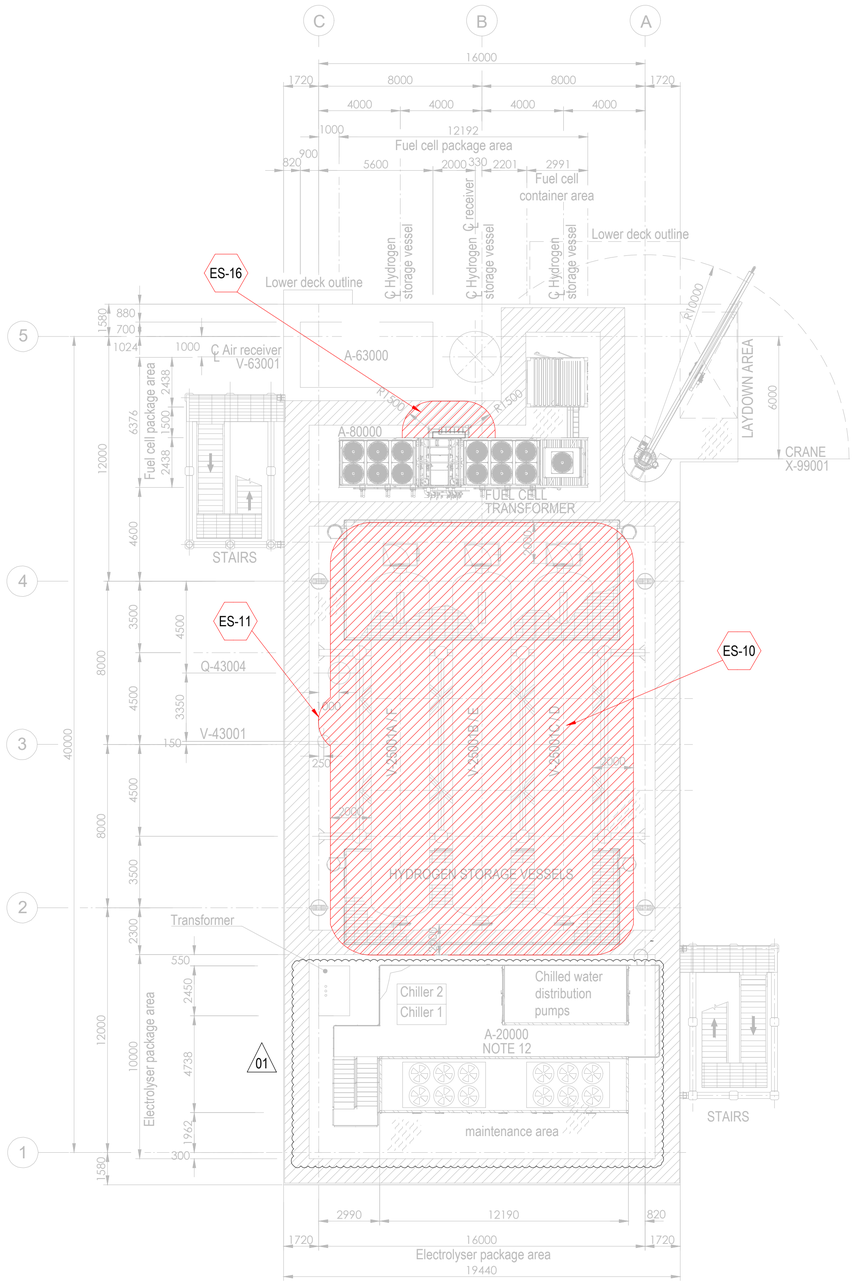
TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET LAYOUT – TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 01/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20118	SHEET 1of2	REV. 01

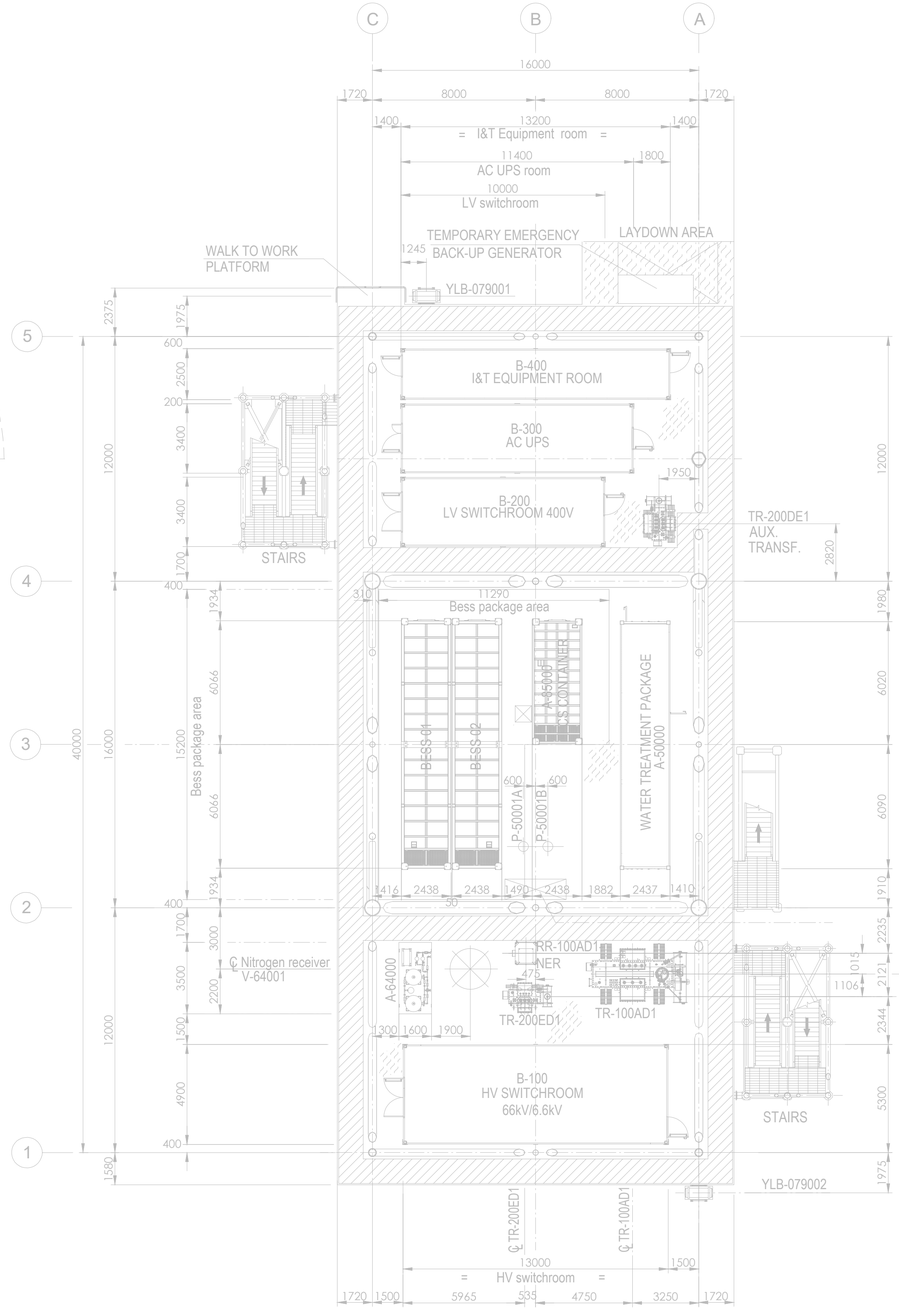
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 01



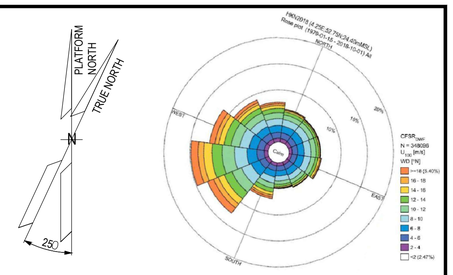
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

01

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

01

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

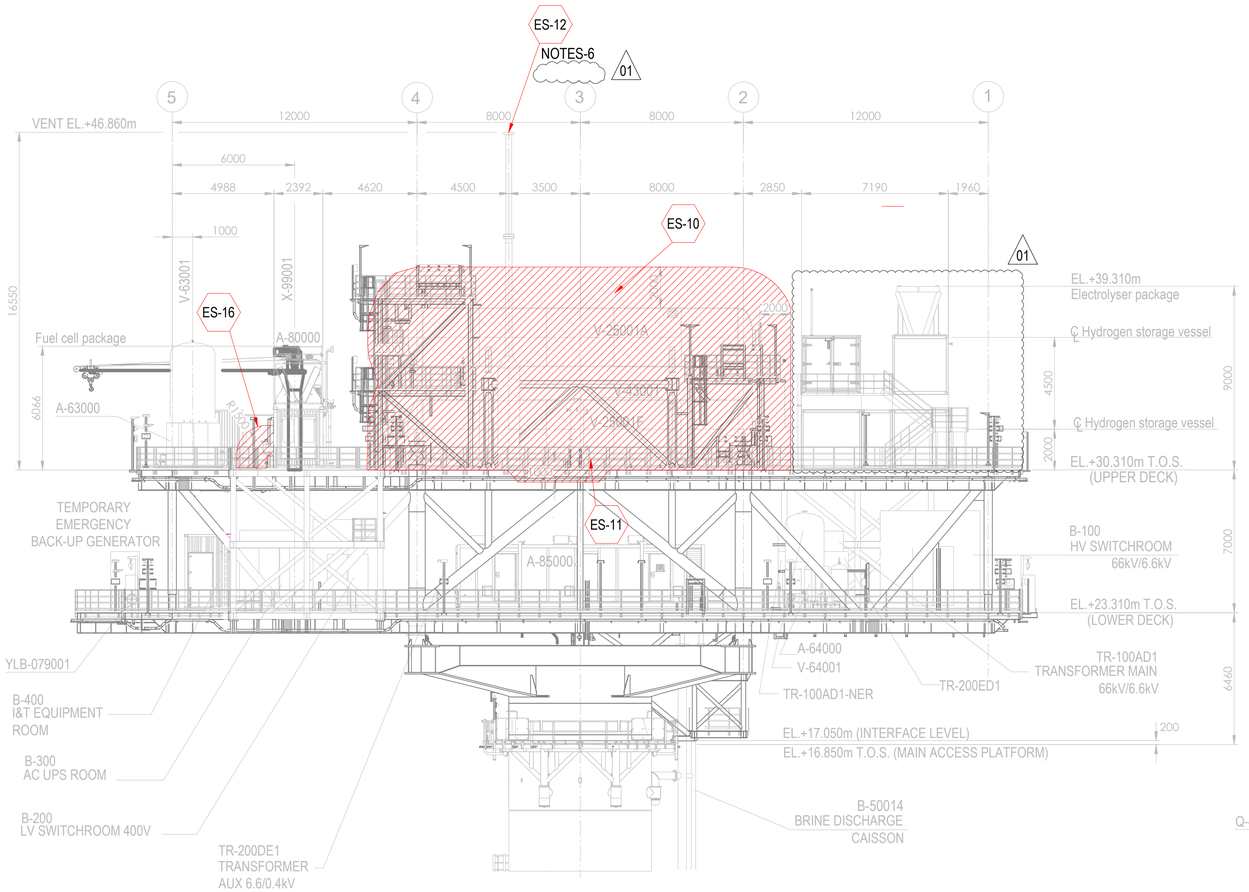
TITLE : BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30022	SHEET 001	REV. 01

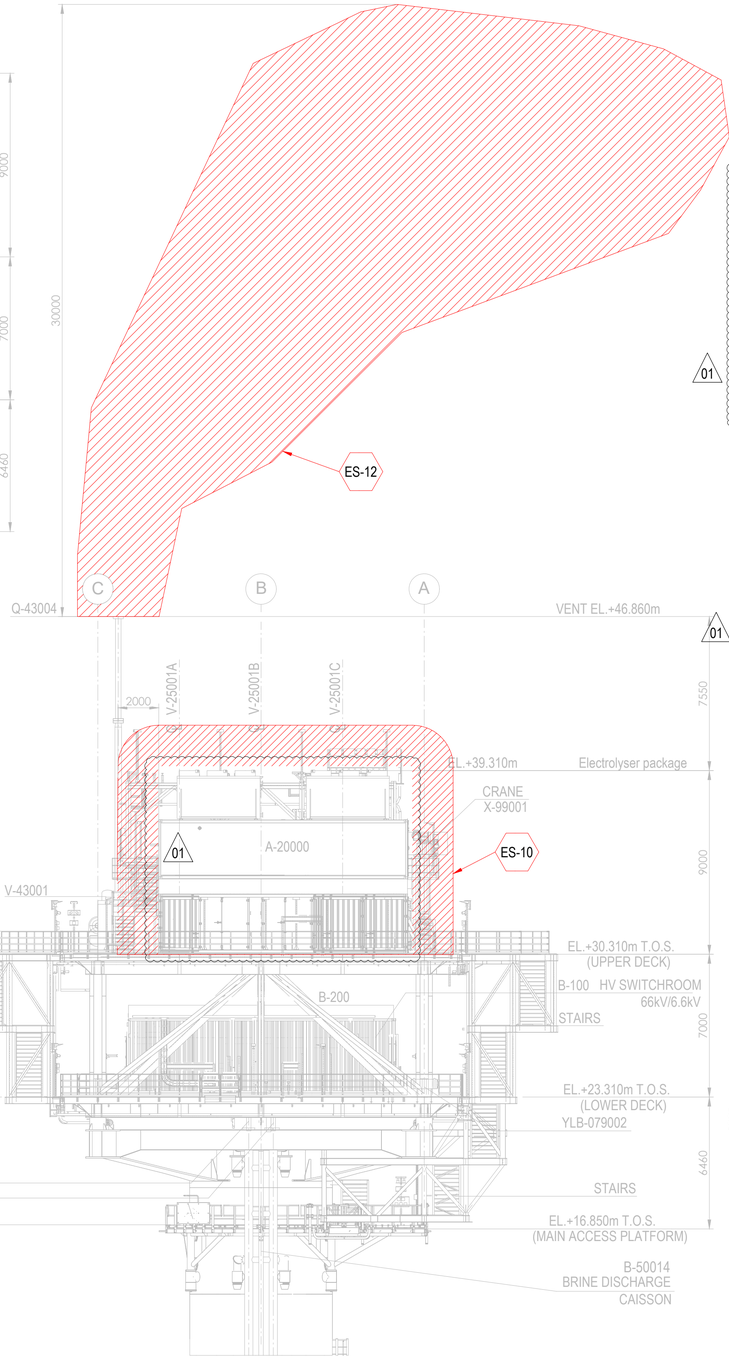
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REV. 01



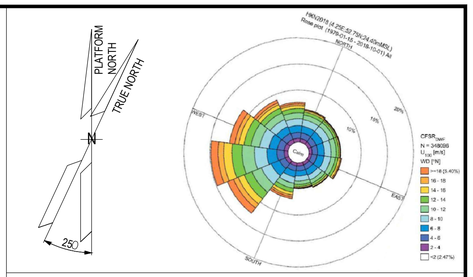
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

01

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. (ES12) IS SHOWN ONLY ON ELEVATION LOOKING NORTH ON THIS LAYOUT
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

01

LEGEND

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30024	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30024 Rev.01

LIGHTING & SMALL POWER DB BoP - DP-200N1

TOP DECK EMERGENCY LIGHTING

Q08 — KL8 — P-EJB-200N1-08-L1-04 — 4G4_E

EJB-200N1-08-L1-04 — TYPE: L21E1

- P-ELF-200N1-08-L1-23 — 4G2.5_E Arm. → ELF-200N1-08-L1-23
- P-ELF-200N1-08-L1-15 — 4G2.5_E Arm. → ELF-200N1-08-L1-15
- P-EJB-200N1-08-L1-01 — 4G4_E Arm. → EJB-200N1-08-L1-01 — TYPE: L21E1
  - P-ELF-200N1-08-L1-01 — 4G2.5_E Arm. → ELF-200N1-08-L1-01
  - P-ELF-200N1-08-L1-02 — 4G2.5_E Arm. → ELF-200N1-08-L1-02
  - P-EJB-200N1-08-L1-07 — 4G4_E Arm. → EJB-200N1-08-L1-07 — TYPE: L21E1
    - P-ELF-200N1-08-L1-03 — 4G2.5_E Arm. → ELF-200N1-08-L1-03
    - P-EJB-200N1-08-L1-06 — 4G4_E Arm. → EJB-200N1-08-L1-06 — TYPE: L21E1
      - P-ELF-200N1-08-L1-07 — 4G2.5_E Arm. → ELF-200N1-08-L1-07
      - P-ELF-200N1-08-L1-06 — 4G2.5_E Arm. → ELF-200N1-08-L1-06
    - P-EJB-200N1-08-L1-05 — 4G4_E Arm. → EJB-200N1-08-L1-05 — TYPE: L21E1
      - P-ELF-200N1-08-L1-04 — 4G2.5_E Arm. → ELF-200N1-08-L1-04
      - P-ELF-200N1-08-L1-05 — 4G2.5_E Arm. → ELF-200N1-08-L1-05
  - P-EJB-200N1-08-L1-03 — 4G4_E Arm. → EJB-200N1-08-L1-03 — TYPE: L21E1
    - P-EJB-200N1-08-L1-08 — 4G4_E Arm. → EJB-200N1-08-L1-08 — TYPE: L21E1
      - P-ELF-200N1-08-L1-10 — 4G2.5_E Arm. → ELF-200N1-08-L1-10
      - P-ELF-200N1-08-L1-09 — 4G2.5_E Arm. → ELF-200N1-08-L1-09
    - P-EJB-200N1-08-L1-09 — 4G4_E Arm. → EJB-200N1-08-L1-09 — TYPE: L21E1
      - P-ELF-200N1-08-L1-11 — 4G2.5_E Arm. → ELF-200N1-08-L1-11
      - P-ELF-200N1-08-L1-08 — 4G2.5_E Arm. → ELF-200N1-08-L1-08
    - P-EJB-200N1-08-L1-12 — 4G4_E Arm. → EJB-200N1-08-L1-12 — TYPE: L21E1
      - P-ELF-200N1-08-L1-14 — 4G2.5_E Arm. → ELF-200N1-08-L1-14
      - P-ELF-200N1-08-L1-24 — 4G2.5_E Arm. → ELF-200N1-08-L1-24
      - P-EJB-200N1-08-L1-11 — 4G4_E Arm. → EJB-200N1-08-L1-11 — TYPE: L21E1
        - P-ELF-200N1-08-L1-13 — 4G2.5_E Arm. → ELF-200N1-08-L1-13
        - P-EJB-200N1-08-L1-10 — 4G4_E Arm. → EJB-200N1-08-L1-10 — TYPE: L21E1
          - P-ELF-200N1-08-L1-12 — 4G2.5_E Arm. → ELF-200N1-08-L1-12
          - P-EJB-200N1-08-L1-20 — 4G4_E Arm. → EJB-200N1-08-L1-20 — TYPE: L21E1
            - P-ELF-200N1-08-L1-22 — 4G2.5_E Arm. → ELF-200N1-08-L1-22
  - P-EJB-200N1-08-L1-16 — 4G4_E Arm. → EJB-200N1-08-L1-16 — TYPE: L21E1
    - P-ELF-200N1-08-L1-18 — 4G2.5_E Arm. → ELF-200N1-08-L1-18
    - P-EJB-200N1-08-L1-17 — 4G4_E Arm. → EJB-200N1-08-L1-17 — TYPE: L21E1
      - P-ELF-200N1-08-L1-19 — 4G2.5_E Arm. → ELF-200N1-08-L1-19
      - P-EJB-200N1-08-L1-18 — 4G4_E Arm. → EJB-200N1-08-L1-18 — TYPE: L21E1
        - P-ELF-200N1-08-L1-20 — 4G2.5_E Arm. → ELF-200N1-08-L1-20
        - P-ELF-200N1-08-L1-25 — 4G2.5_E Arm. → ELF-200N1-08-L1-25
        - P-EJB-200N1-08-L1-19 — 4G4_E Arm. → EJB-200N1-08-L1-19 — TYPE: L21E1
          - P-ELF-200N1-08-L1-21 — 4G2.5_E Arm. → ELF-200N1-08-L1-21
          - P-EJB-200N1-08-L1-15 — 4G4_E Arm. → EJB-200N1-08-L1-15 — TYPE: L21E1
            - P-ELF-200N1-08-L1-17 — 4G2.5_E Arm. → ELF-200N1-08-L1-17
            - P-EJB-200N1-08-L1-14 — 4G4_E Arm. → EJB-200N1-08-L1-14 — TYPE: L21E1
              - P-ELF-200N1-08-L1-16 — 4G2.5_E Arm. → ELF-200N1-08-L1-16

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
TOP DECK–EMERGENCY LIGHTING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DG-20125 | SHEET 011 | REV. 01

F.to UNI A3: 420mmx297mm

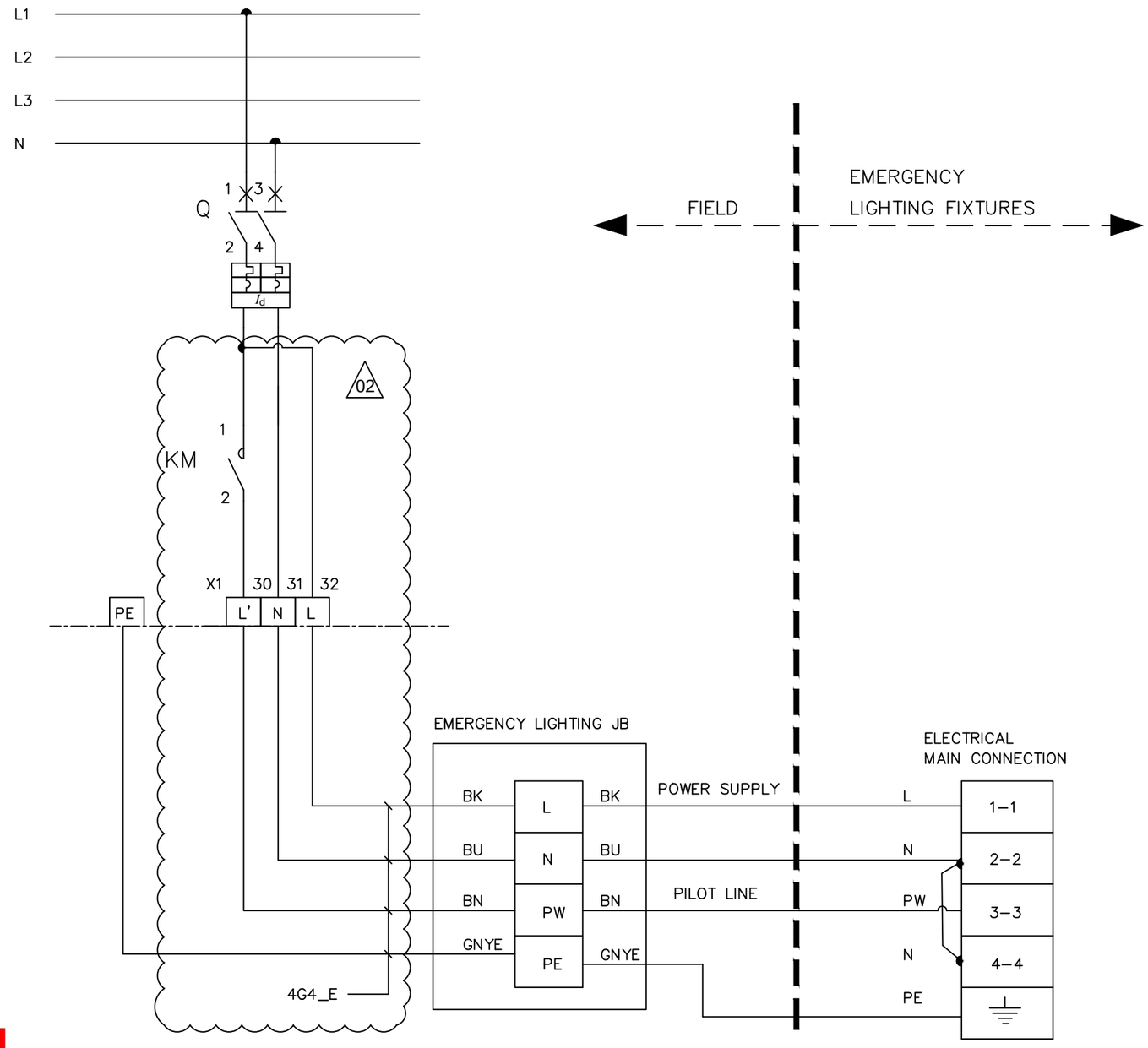
File Name : 123A90-DDL-EL-DG-20125

DP–200N1

FOR EMERGENCY LIGHTING

INTERNAL BUS BAR 400V–230V / 50Hz

EMERGENCY LIGHTS WIRING DIAGRAM



L – POWER SUPPLY

N – NEUTRAL

PW – PILOT LINE

PE – PROTECTIVE EARTH

BN – BROWN (L')

BK – BLACK (L)

BU – BLUE (N)

GNYE – GREEN/YELLOW (PE)

02

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DG-20125**

REV.:	DATE:	SIGNATURE:
2_C	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	07/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	08/08/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)

TITLE : BASE LOAD POWER HUB (BLPH)
LIGHTING & SOCKET CIRCUIT DIAGRAM
EMERGENCY LIGHTS WIRING DIAGRAM

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DG–20125

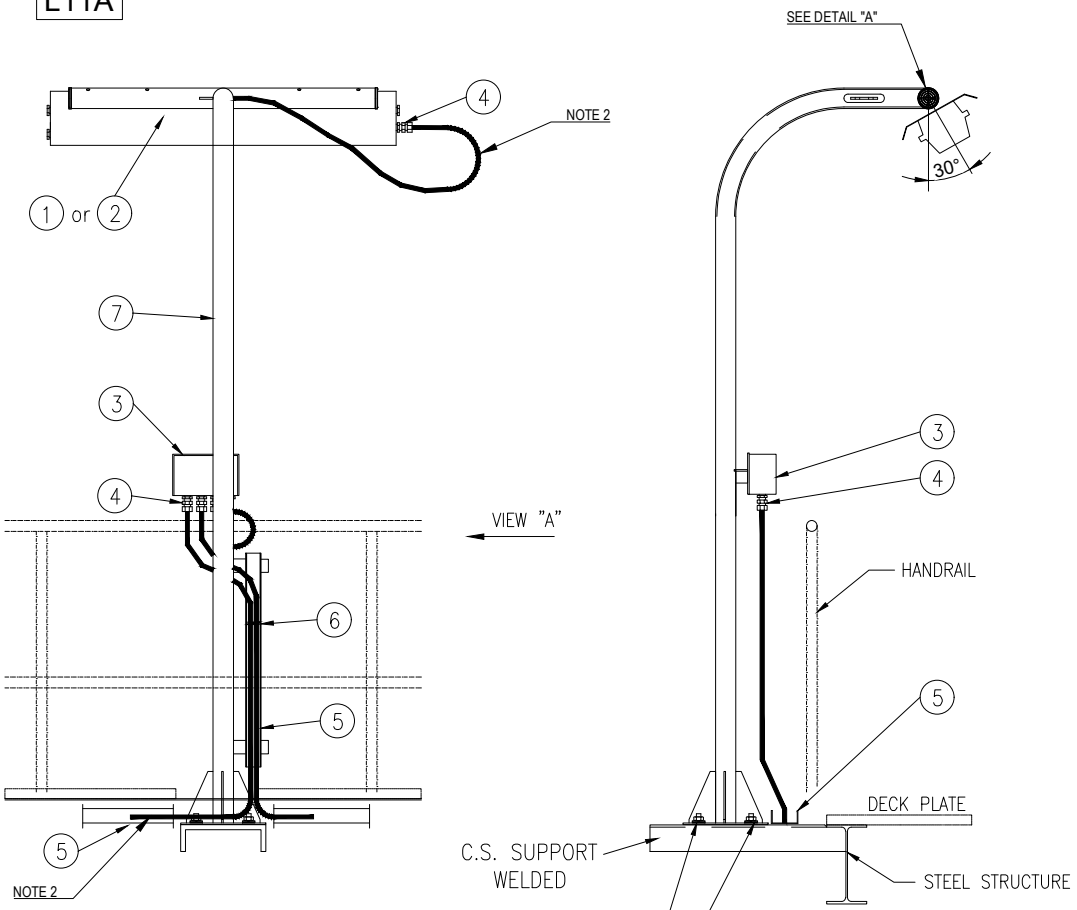
SHEET 014

REV. 02

F.to UNI A3: 420mmx297mm

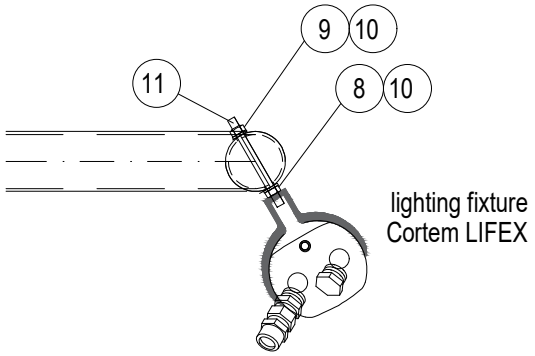
File Name : 123A90–DDL–EL–DG–20125

L11A



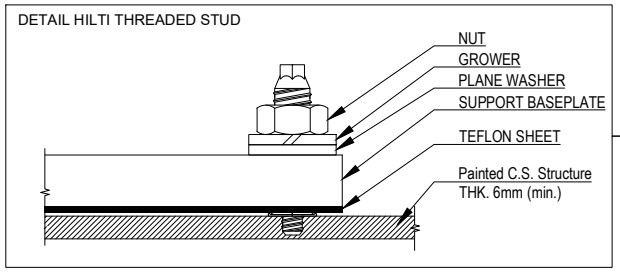
VIEW "A"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	42W LED LUMINARIES	ALUMINIUM ALLOY		1	
2	45W LED LUMINARIES C/W BATTERY	ALUMINIUM ALLOY		1	
3	JUNCTION BOX (Ex)	GRP		1	NOTE 1
4	CABLE GLAND ~~C/W EARTH TAG,~~ WASHERS, LOCKNUT AND WEATHERPROOF WASHERS	BRASS NICKEL PLATED		AS REQ.	
5	CABLE TRAY	AISI 316L			
6	STAINLESS STEEL NYLON COATED CABLE TIE	SS NYLON COATED			
7	POLE SUPPORT FOR LAMP	AISI 316L	2"		
8	NUT	AISI 316L	M8		
9	SELF.LOCKING NUT	AISI 316L	M8		
10	LARGE PLANE WASHER (24mm DIAM.)	AISI 316L	M8		
11	THREADED ROD M8x100	AISI 316L	M8		



DETAIL "A"

SUPPORT BOLTED ON HILTI S-BT INSTALLED ON WELDED BEAM:



VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

NOTES:

1) FOR LAMPS IN HAZARDOUS AREA, USE ARMOURED CABLE, DOUBLE SEAL CABLE GLAND AND EX JUNCTION BOX.

2) ALWAYS ENSURE CABLE LENGTH IS >3m

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	30/09/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-LIGHTING SYSTEM
LIGHTING FIXTURE MOUNTED ON POLE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20091 | SHEET 014 | REV. 02

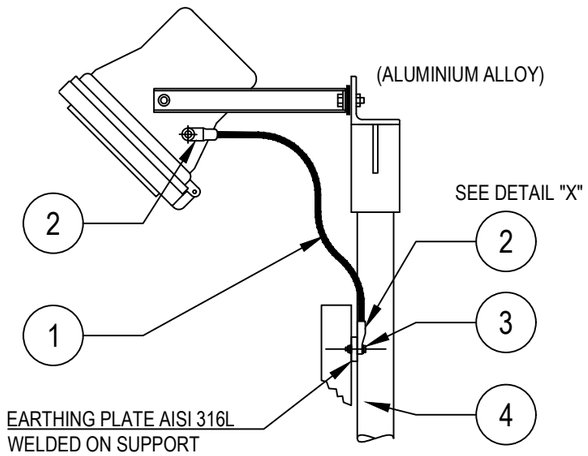
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20091 REV.02.DWG

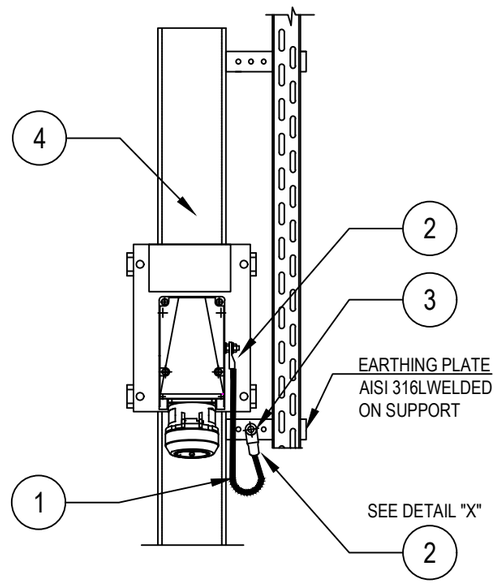
E05

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	Y/G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$6mm^2$	2	
3	HEXAG. BOLTS, PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M8X30	1	

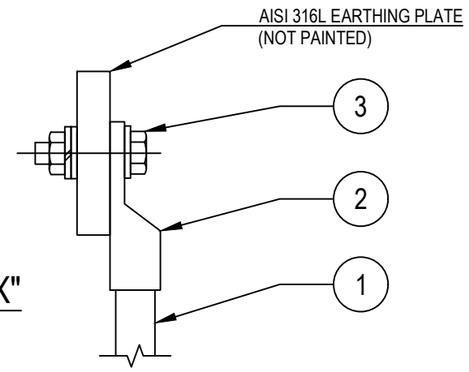
LIGHTING FIXTURE/GENERAL ITEM ON POLE



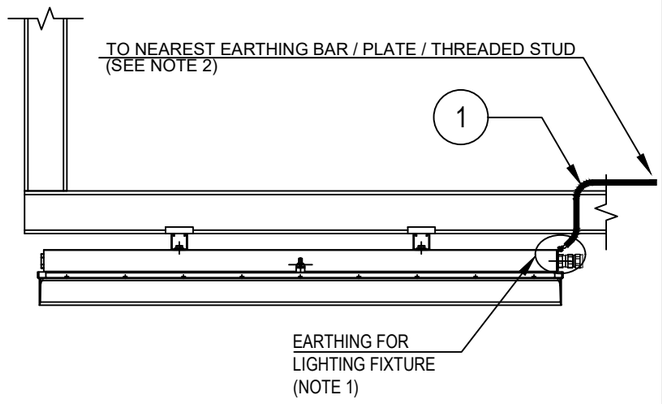
POWER SOCKET OUTLET



DETAIL "X"



LIGHTING FIXTURES



Refer also to TYP. "E32" (SEE SHEET 23)

TYPICAL VALID ALSO FOR NAVAID LIGHTS

NOTES:

1) ALL LIGHTING FIXTURES AND RELEVANT ARMOUR OF THE CABLE, ARE CONNECTED TO EARTH CONNECTION THROUGH THE EARTHING TAG OF THE CABLE GLAND

2) FOR EARTHING POINT USE ONE OF THE FOLLOWING METHODS:
TYP. E03A-D sh. 004 (EARTHING BAR ON STRUCT. UNISTRUT AND CABLE TRAY)
TYP. E11C sh. 003 (EARTHING PLATE)
TYP. E11D sh. 003 (THREADED STUD ON EXTERNAL STRUCTURE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 006 | REV. 02

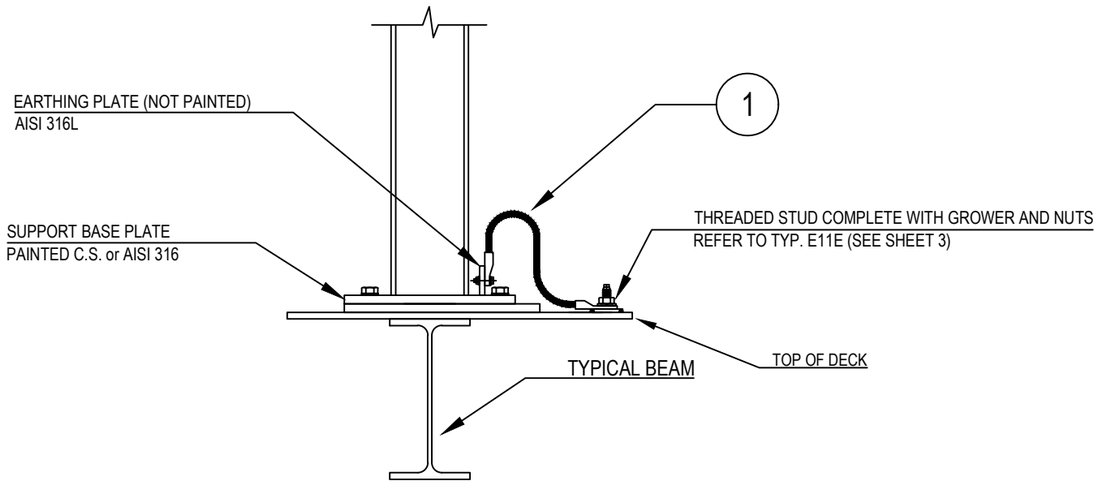
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

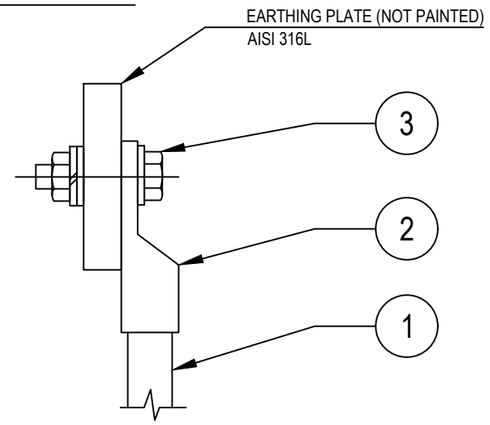
E24

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	As. R. Y/G INSULATING COPPER CONDUCTOR	COPPER	$35mm^2$		
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	$35mm^2$	2	~~NOTE 1~~
3	HEXAG. BOLT M10X30 COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30	2	

GENERIC SUPPORT BOLTED ON STRUCTURE



DETAIL "X"



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR POLE/SUPPORT OF GENERIC EQUIPMENTS

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–EL–DD–20090	012	02

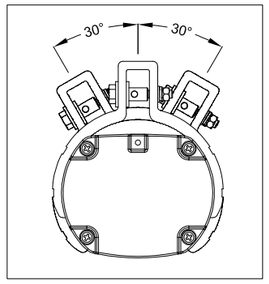
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

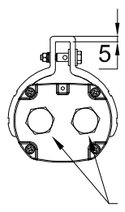
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

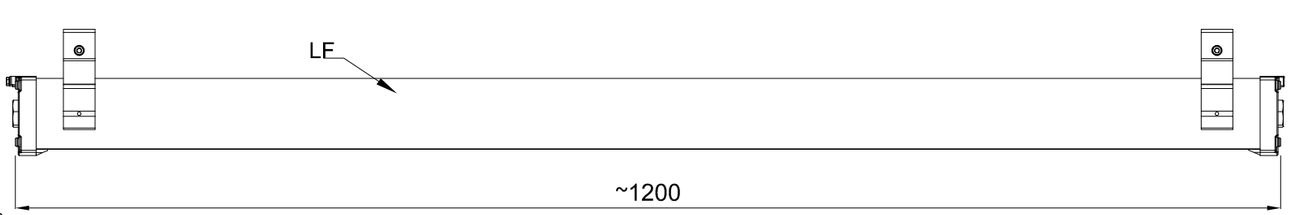
N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

LEFT SIDE (OUT)

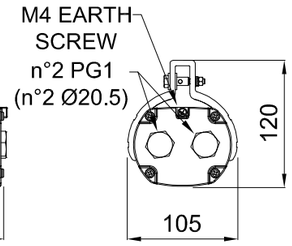


n°2 PG1
(n°2 Ø20.5)

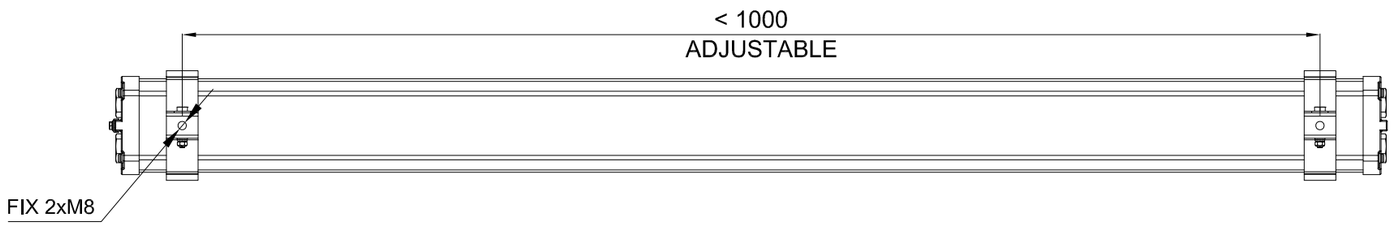
FRONT SIDE



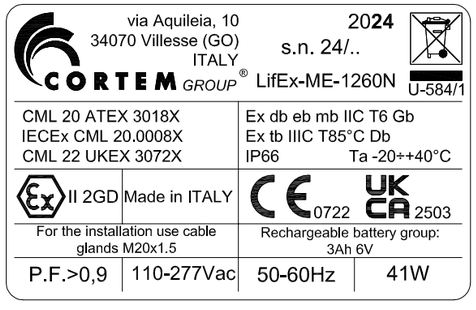
RIGHT SIDE (IN)



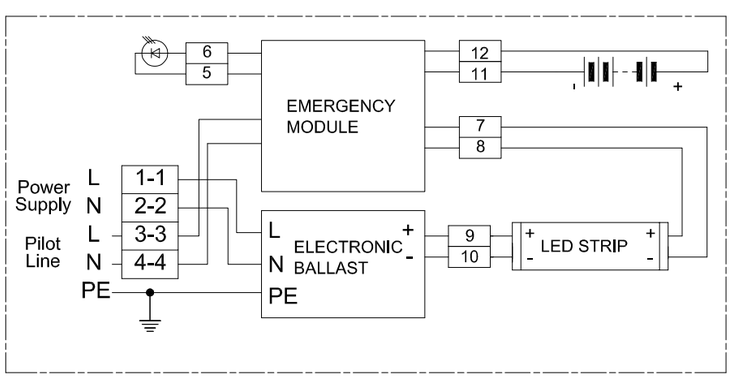
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB: COV2402693
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 2 / TOT. 2
NEXT /

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AUTHORIZATION

Smart Professional R. 2012

Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	45W LED Linear Luminaire-Emergency Lighting-ATEX Area				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		01
4	Serial Number	by vendor			00
5	Quantity	78 Nos.	78 Nos	(69+9 Spare)	01
6	Location / Module	Lower deck/Upper deck/ Below lower deck			00
7	**LED Lamp**				
8	Nominal power	45 watts	60 watts		01
9	No. of linear	1	1		01
10	Luminous flux	5810 lm	6200 lm		01
11	Colour Temperature	5000 K	5000 K		01
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Ex II 2GD Ex db eb mb IIC Gb Ex tb IIIC Db		01
14	Degree of Protection (IP)	IP 56	IP 66		01
15	ATEX certified	Classification EX db	ATEX CML 20 ATEX 3018X		01
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		01
18	Reflector	GRP/Aluminium	Aluminium		01
19	Diffuser	Polycarbonate/temperate glass	Tempered glass		01
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	4 Entries, 2 per side		01
22	Size	M20	Ø20.5mm		01
23	**Emergency Battery Pack**				
24	Requirement	Required			00
25	Battery type	NiCd internal battery, gas-tight	Ni/Mh		01
26	Autonomy	180 mins.	180 min		01
27	Emergency luminous flux	1168 lm	1168 lm		01
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120 (mm)		01
30	Weight	by vendor	4.5kg		01

Note:

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86772	LIFEX-ME-0645-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8 HAZARDOUS-AREA_3 HAZARDOUS-AREA_1 HAZARDOUS-AREA_2
ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_8
ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_3 HAZARDOUS-AREA_6
ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_1 HAZARDOUS-AREA_4
ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_4 HAZARDOUS-AREA_1
ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6 HAZARDOUS-AREA_3
ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	
ELF-200N1-09-L2-24	Emergency Lighting Fixture	BELOW LOWER DECK	1724001290	Cortem Spa	Cortem Spa	24/86773	LIFEX-ME-1260N-BB	Zone 1	CML 20 ATEX 3018X	1724001290-EL-LIS-00005	Ex db eb mb IIC T6 Gb	N/A	N/A	True	N/A	True	

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014	EN IEC 60079-7:2015+A1:2018
EN 60079-18:2015+A1:2017	EN 60079-31:2014	

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T…°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T…°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

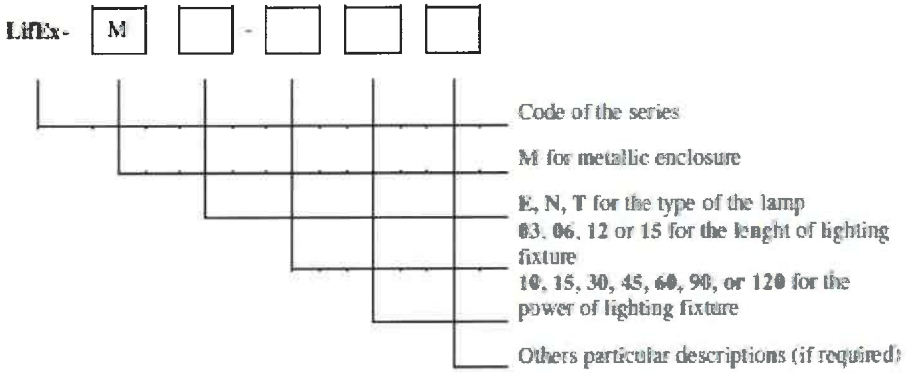
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

NOT APPLICABLE

Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

NOT APPLICABLE

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

NOT APPLICABLE

Section 9 MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE

NOT APPLICABLE

Section 10 MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE

NOT APPLICABLE

Section 11 MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE

NOT APPLICABLE

Section 12 FAT / VENDOR REPORTS

NOT APPLICABLE

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE