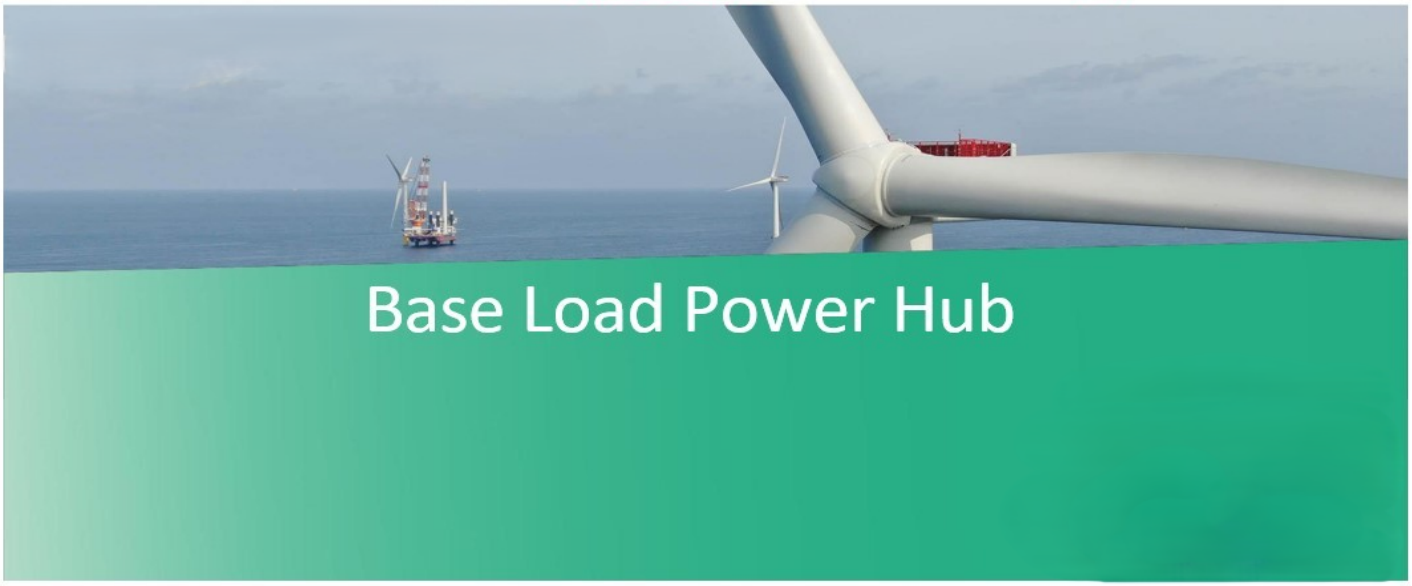
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	84 Battery & No-Break System
SUBSYSTEM	84-10 AC 35 kVA UPS System (UP-200F3)

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

Sub System N°:	84-10	Tick as appropriate	ONSHORE	O
Description:	AC 35 kVA UPS System (UP-200F3)		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*	O
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*	O
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*	OK
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**

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123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	2		Issued on:	2024-12-02	
System:	84	/	Battery & No-Break System		
SubSystem:	84-10	/	AC 35 kVA UPS System (UP-200F3)		

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	30

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	2024-12-02	2024-12-02	2024-12-03	2024-12-03
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2024-12-02T18:07:09.924Z	PROVERLIS Digitaly signed by Anthony Iveson 2024-12-02T17:45:27.586Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-03T10:55:08.604Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-03T10:55:15.564Z

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Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 84-10 & process: MC

Electrical	84-10 AC 35 kVA UPS System (UP-200F3)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83028-CEL	LV Switchgear / AC UPS PAS - 30min - Line A	ONSHORE	C10000553	CPX09	100	2024-11-02	RFC 1
83029-CEL	LV Switchgear / AC UPS PAS - 30min - Line B	ONSHORE	C10000554	CPX09	100	2024-11-02	RFC 1
83030-CEL	LV Switchgear / AC UPS PAS - 30min - Bypass	ONSHORE	C10000555	CPX09	100	2024-11-02	RFC 1
83122-CEL	Lighting & Small Power DB BoP / AC UPS PAS AUXILIARY	ONSHORE	C10000641	CPX09	100	2024-10-24	RFC 1
84330-CEC	Isolator Battery Box for AC UPS 35 kVA / AC UPS 35 kVA Redundant System with By-Pass	ONSHORE	C10002343	CPX10	100	2024-11-02	RFC 1
84331-CEC	Isolator Battery Box for AC UPS 35 kVA / AC UPS 35 kVA Redundant System with By-Pass	ONSHORE	C10002344	CPX10	100	2024-11-02	RFC 1
84331-CEL-1-N	AC UPS PAS - Charger-A / AC UPS PAS - Battery Isolator-A	ONSHORE	C10000643	CPX09	100	2024-11-02	RFC 1
84331-CEL-1-P	AC UPS PAS - Charger-A / AC UPS PAS - Battery Isolator-A	ONSHORE	C10000642	CPX09	100	2024-11-02	RFC 1
84331-CEL-2-N	AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-A	ONSHORE	C10000645	CPX09	100	2024-11-02	RFC 1
84331-CEL-2-P	AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-A	ONSHORE	C10000644	CPX09	100	2024-11-02	RFC 1
84332-CEL-1-N	AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B	ONSHORE	C10000647	CPX09	100	2024-11-02	RFC 1
84332-CEL-1-P	AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B	ONSHORE	C10000646	CPX09	100	2024-11-02	RFC 1
84332-CEL-2-N	AC UPS PAS - Battery Isolator-B / AC UPS PAS - Battery-B	ONSHORE	C10000649	CPX09	100	2024-11-02	RFC 1
84332-CEL-2-P	AC UPS PAS - Battery Isolator-B / AC UPS PAS - Battery-B	ONSHORE	C10000648	CPX09	100	2024-11-02	RFC 1
BA-200F3A	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	ONSHORE	C10000848	CPX17	100	2024-11-02	RFC 1
BA-200F3B	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	ONSHORE	C10000849	CPX17	100	2024-11-02	RFC 1
CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	ONSHORE	C10000855	CPX00	100	2024-11-02	RFC 1
CB-200F3B	Isolator Battery Box for AC UPS 35 kVA	ONSHORE	C10000856	CPX00	100	2024-11-02	RFC 1
UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	ONSHORE	C10000871	CPX16	100	2024-11-02	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 84-10 & process: MC

Instrumental	84-10 AC 35 kVA UPS System (UP-200F3)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
C-CB-200F3A/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	ONSHORE	C10000197	CJX10	100	2024-11-25	RFC 2
C-CB-200F3B/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	ONSHORE	C10000198	CJX10	100	2024-11-25	RFC 2
UP-200F3/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	ONSHORE	C10000196	CJX10	100	2024-11-30	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 84-10 & process: MC

Telecom	84-10 AC 35 kVA UPS System (UP-200F3)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
UP-200F3/B400-NET-001.01	COMMUNICATION / EMCS SYSTEM	ONSHORE	C10004370	CIX09	100	2024-11-22	RFC 2
UP-200F3/B400-NET-001.02	COMMUNICATION / EMCS SYSTEM	ONSHORE	C10004371	CIX09	100	2024-11-22	RFC 2

CROSSWIND

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Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 84 Battery & No-Break System

SUBSYSTEM 84-10 AC 35 kVA UPS System (UP-200F3)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000261	B	83122-CEL C10000641	Cable to be fixed with proper cable ties, after MCT installation of the panel DP-200N1	-		Gtangianu 2024-10-24			
C30000262	B	83122-CEL C10000641	Wrong core identification tag on both cable's termination	-		Gtangianu 2024-10-24			
C30000263	B	83122-CEL C10000641	Plastic cable ties to be replaced on external routing	-		Gtangianu 2024-10-24			
C30000287	B	UP-200F3 C10000871	Cleaning is required inside and on the top of the panel	.		Gtangianu 2024-11-02			
C30000288	B	UP-200F3 C10000871	Missing thermo shrink on internal earthing connections.	.		Gtangianu 2024-11-02			
C30000289	B	83028-CEL C10000553	Missing identification tags on terminal strip (X1 / 1U/1V/1W). See attached photo	.		Gtangianu 2024-11-02			
C30000290	B	83028-CEL C10000553	Identification tag of wire are wrong inside SG-200N1 (A3/+01)	.		Gtangianu 2024-11-02			
C30000291	B	83028-CEL C10000553	Missing cable tags on all routing (MCT of B-200_ B-300_ inside and outside UP-200F3)	.		Gtangianu 2024-11-02			
C30000292	B	83028-CEL C10000553	Plastic cable ties to be replaced on external routing	.		Gtangianu 2024-11-02			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 84 Battery & No-Break System
SUBSYSTEM 84-10 AC 35 kVA UPS System (UP-200F3)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000293	B	84332-CEL-1-P C10000646	Missing identification number on terminal strip X1+	.		Gtangianu 2024-11-02			
C30000294	B	83029-CEL C10000554	Missing cable tags on internal and external side of MCT of B-200/B-300	.		Gtangianu 2024-11-02			
C30000295	B	83029-CEL C10000554	Plastic cable ties to be replaced on external routing	.		Gtangianu 2024-11-02			
C30000296	B	83029-CEL C10000554	Identification tag of wire are wrong inside SG-200N1 (A4/+01) and are missing inside UP-200F3 (X1/3W)	.		Gtangianu 2024-11-02			
C30000297	B	83029-CEL C10000554	Missing identification numbers on terminal strip inside UP-200F3 (X1/3U/3V/3W)	.		Gtangianu 2024-11-02			
C30000298	B	83030-CEL C10000555	Identification tag of wire are wrong or missing inside SG-200N1 (A7/+02)	.		Gtangianu 2024-11-02			
C30000299	B	83030-CEL C10000555	Missing cable tags on internal and external side of MCT (B-200/B-300)	.		Gtangianu 2024-11-02			
C30000300	B	83030-CEL C10000555	Plastic cable ties to be replaced on external routing	.		Gtangianu 2024-11-02			
C30000301	B	84330-CEC C10002343	Missing cable tag inside and outside CB-200F3A and on the top side of BC-200F3A	.		Gtangianu 2024-11-02			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 84 Battery & No-Break System
SUBSYSTEM 84-10 AC 35 kVA UPS System (UP-200F3)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000302	B	84330-CEC C10002343	Missing identification number on terminal strip X15 (inside BC-200F3A)	.		Gtangianu 2024-11-02			
C30000303	B	84331-CEL-2-N C10000645	Missing cable tag inside CB-200F3A	.		Gtangianu 2024-11-02			
C30000304	B	CB-200F3A C10000855	Missing thermo shrink on internal earthing connections	.		Gtangianu 2024-11-02			
C30000305	B	CB-200F3B C10000856	Missing thermo shrink on internal earthing connections	.		Gtangianu 2024-11-02			
C30000306	B	BA-200F3A C10000848	Missing tag on battery bank	.		Gtangianu 2024-11-02			
C30000307	B	BA-200F3B C10000849	Missing tag on battery bank	.		Gtangianu 2024-11-02			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	84	Battery & No-Break System
SUBSYSTEM	84-10	AC 35 kVA UPS System (UP-200F3)

Telecom

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000791	B	UP-200F3/B400 -NET-001.01 C10004370	Identification tag wire missing inside UP-200F3 connection.	.		Gtangianu 2024-11-22			
C30000792	B	UP-200F3/B400 -NET-001.02 C10004371	Identification tag wire missing inside UP-200F3 connection.	.		Gtangianu 2024-11-22			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	84	Battery & No-Break System
SUBSYSTEM	84-10	AC 35 kVA UPS System (UP-200F3)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000880	B	C-CB-200F3A/B 400-SIS-001 C10000197	Missing cable tag outside B-400-SIS-001 panel	.		Pschintu 2024-11-25			
C30000881	B	C-CB-200F3B/B 400-SIS-001 C10000198	Missing cable tag outside B-400-SIS-001 panel	.		Pschintu 2024-11-25			
C30001057	B	UP-200F3/B400 -SIS-001 C10000196	Missing core identification tag by UP-200F3 side	.		Pschintu 2024-11-30			
C30001058	B	UP-200F3/B400 -SIS-001 C10000196	Missing SS cable tag	.		Pschintu 2024-11-30			

Section 2 CONSOLIDATED PUNCH LISTS

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Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 84 Battery & No-Break System

SUBSYSTEM 84-10 AC 35 kVA UPS System (UP-200F3)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000261	B	83122-CEL C10000641	Cable to be fixed with proper cable ties, after MCT installation of the panel DP-200N1	-		Gtangianu 2024-10-24	2025-01-31	Gtangianu 2025-01-31	2025-01-31
C30000262	B	83122-CEL C10000641	Wrong core identification tag on both cable's termination	-		Gtangianu 2024-10-24	2025-01-31	Gtangianu 2025-01-31	2025-01-31
C30000263	B	83122-CEL C10000641	Plastic cable ties to be replaced on external routing	-		Gtangianu 2024-10-24	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000287	B	UP-200F3 C10000871	Cleaning is required inside and on the top of the panel	.		Gtangianu 2024-11-02	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000288	B	UP-200F3 C10000871	Missing thermo shrink on internal earthing connections.	.		Gtangianu 2024-11-02	2025-03-06	JKrizanic 2025-03-06	2025-03-06
C30000289	B	83028-CEL C10000553	Missing identification tags on terminal strip (X1 / 1U/1V/1W). See attached photo	.		Gtangianu 2024-11-02	2025-03-06	JKrizanic 2025-03-06	2025-03-06
C30000290	B	83028-CEL C10000553	Identification tag of wire are wrong inside SG-200N1 (A3/+01)	.		Gtangianu 2024-11-02	2024-12-18	Gtangianu 2024-12-18	2024-12-18
C30000291	B	83028-CEL C10000553	Missing cable tags on all routing (MCT of B-200_ B-300_ inside and outside UP-200F3)	.		Gtangianu 2024-11-02	2025-01-31	Gtangianu 2025-01-31	2025-01-31
C30000292	B	83028-CEL C10000553	Plastic cable ties to be replaced on external routing	.		Gtangianu 2024-11-02	2025-02-26	Pschintu 2025-02-26	2025-02-26

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Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 84 Battery & No-Break System

SUBSYSTEM 84-10 AC 35 kVA UPS System (UP-200F3)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000293	B	84332-CEL-1-P C10000646	Missing identification number on terminal strip X1+	.		Gtangianu 2024-11-02	2025-03-06	Gtangianu 2025-03-06	2025-03-06
C30000294	B	83029-CEL C10000554	Missing cable tags on internal and external side of MCT of B-200/B-300	.		Gtangianu 2024-11-02	2025-01-31	Gtangianu 2025-01-31	2025-01-31
C30000295	B	83029-CEL C10000554	Plastic cable ties to be replaced on external routing	.		Gtangianu 2024-11-02	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000296	B	83029-CEL C10000554	Identification tag of wire are wrong inside SG-200N1 (A4/+01) and are missing inside UP-200F3 (X1/3W)	.		Gtangianu 2024-11-02	2024-12-18	Gtangianu 2024-12-18	2024-12-18
C30000297	B	83029-CEL C10000554	Missing identification numbers on terminal strip inside UP-200F3 (X1/3U/3V/3W)	.		Gtangianu 2024-11-02	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30000298	B	83030-CEL C10000555	Identification tag of wire are wrong or missing inside SG-200N1 (A7/+02)	.		Gtangianu 2024-11-02	2025-01-31	Gtangianu 2025-01-31	2025-01-31
C30000299	B	83030-CEL C10000555	Missing cable tags on internal and external side of MCT (B-200/B-300)	.		Gtangianu 2024-11-02	2025-01-31	Gtangianu 2025-01-31	2025-01-31
C30000300	B	83030-CEL C10000555	Plastic cable ties to be replaced on external routing	.		Gtangianu 2024-11-02	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000301	B	84330-CEC C10002343	Missing cable tag inside and outside CB-200F3A and on the top side of BC-200F3A	.		Gtangianu 2024-11-02	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14

CROSSWIND

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PUNCH LIST REPORT

SYSTEM 84 Battery & No-Break System

SUBSYSTEM 84-10 AC 35 kVA UPS System (UP-200F3)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000302	B	84330-CEC C10002343	Missing identification number on terminal strip X15 (inside BC-200F3A)	.		Gtangianu 2024-11-02	2025-03-06	Gtangianu 2025-03-06	2025-03-06
C30000303	B	84331-CEL-2-N C10000645	Missing cable tag inside CB-200F3A	.		Gtangianu 2024-11-02	2024-12-14	Ecarotenuto 2024-12-14	2024-12-14
C30000304	B	CB-200F3A C10000855	Missing thermo shrink on internal earthing connections	.		Gtangianu 2024-11-02	2025-03-06	Gtangianu 2025-03-06	2025-03-06
C30000305	B	CB-200F3B C10000856	Missing thermo shrink on internal earthing connections	.		Gtangianu 2024-11-02	2025-03-06	Gtangianu 2025-03-06	2025-03-06
C30000306	B	BA-200F3A C10000848	Missing tag on battery bank	.		Gtangianu 2024-11-02	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30000307	B	BA-200F3B C10000849	Missing tag on battery bank	.		Gtangianu 2024-11-02	2025-02-04	Gtangianu 2025-02-04	2025-02-04

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PUNCH LIST REPORT

SYSTEM 84 Battery & No-Break System

SUBSYSTEM 84-10 AC 35 kVA UPS System (UP-200F3)

Telecom

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000791	B	UP-200F3/B400 -NET-001.01 C10004370	Identification cable tag missing inside UP-200F3 connection.	.		Gtangianu 2024-11-22	2025-02-21	Gtangianu 2025-02-21	2025-02-21
C30000792	B	UP-200F3/B400 -NET-001.02 C10004371	Identification cable tag missing inside UP-200F3 connection.	.		Gtangianu 2024-11-22	2025-02-21	Gtangianu 2025-02-21	2025-02-21

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PUNCH LIST REPORT

SYSTEM 84 Battery & No-Break System

SUBSYSTEM 84-10 AC 35 kVA UPS System (UP-200F3)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000880	B	C-CB-200F3A/B 400-SIS-001 C10000197	Missing cable tag outside B-400-SIS-001 panel	.		Pschintu 2024-11-25	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30000881	B	C-CB-200F3B/B 400-SIS-001 C10000198	Missing cable tag outside B-400-SIS-001 panel	.		Pschintu 2024-11-25	2024-12-11	Pschintu 2024-12-11	2024-12-11
C30001057	B	UP-200F3/B400 -SIS-001 C10000196	Missing core identification tag by UP-200F3 side	.		Pschintu 2024-11-30	2025-03-06	Gtangianu 2025-03-06	2025-03-06
C30001058	B	UP-200F3/B400 -SIS-001 C10000196	Missing SS cable tag	.		Pschintu 2024-11-30	2025-01-31	Gtangianu 2025-01-31	2025-01-31

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000261

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000641	1.4 Discipline	Electrical
1.2 Item	83122-CEL		Lighting & Small Power DB BoP / AC UPS PAS AUXILIARY
1.3 Subsystem	84-10		AC 35 kVA UPS System (UP-200F3)

2 - OBSERVATION

Cable to be fixed with proper cable ties, after MCT installation of the panel DP-200N1

Name: Giovanni Tangianu

Date: 2024-10-24

Signature: Digitaly signed by Giovanni Tangianu 2024-10-24T16:05:50.015Z

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority: B PL B

3.4 Activity code: MC Mechanical Completion

3.5 Action by: RM_CONSTR RM

Name: Giovanni Tangianu

Date: 2024-10-24

Signature: Digitaly signed by Giovanni Tangianu 2024-10-24T16:06:02.520Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

fixed.

Name: Giovanni Tangianu

Date: 2025-01-31

Signature: Digitaly signed by Giovanni Tangianu 2025-01-31T10:44:27.052Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000262

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000641	1.4 Discipline	Electrical
1.2 Item	83122-CEL		Lighting & Small Power DB BoP / AC UPS PAS AUXILIARY
1.3 Subsystem	84-10		AC 35 kVA UPS System (UP-200F3)

2 - OBSERVATION

Wrong core identification tag on both cable's termination

Name: Giovanni Tangianu

Date: 2024-10-24

Signature: Digitaly signed by Giovanni Tangianu 2024-10-24T16:09:06.856Z

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	2024-10-24
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-24T16:09:18.805Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-01-31

Signature: Digitaly signed by Giovanni Tangianu 2025-01-31T10:43:56.696Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000263

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000641	1.4 Discipline	Electrical
1.2 Item	83122-CEL		Lighting & Small Power DB BoP / AC UPS PAS AUXILIARY
1.3 Subsystem	84-10		AC 35 kVA UPS System (UP-200F3)

2 - OBSERVATION

Plastic cable ties to be replaced on external routing

Name: Giovanni Tangianu

Date: 2024-10-24

Signature: Digitaly signed by Giovanni Tangianu 2024-10-24T16:19:14.211Z

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	2024-10-24
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-10-24T16:19:24.905Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature: Digitaly signed by Paolo Schintu 2025-02-26T12:36:41.421Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000287

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000871	1.4 Discipline	Electrical
1.2 Item	UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Cleaning is required inside and on the top of the panel

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:12:16.068Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:12:29.768Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:54:41.596Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000288

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000871	1.4 Discipline	Electrical
1.2 Item	UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing thermo shrink on internal earthing connections.

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:21:47.868Z

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	2024-11-02
3.5 Action by	PRE-COMM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:21:57.874Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

ACCEPTED BY ROSETTI MARINO

Name: Josip Krizanic

Date: 2025-03-06

Signature: Digitaly signed by Josip Krizanic 2025-03-06T07:29:56.436Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000289

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000553	1.4 Discipline	Electrical
1.2 Item	83028-CEL	LV Switchgear / AC UPS PAS - 30min - Line A	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing identification tags on terminal strip (X1 / 1U/1V/1W). See attached photo

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:24:38.735Z

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	2024-11-02
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:24:54.775Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

ACCEPTED BY ROSETTI MARINO

Name: Josip Krizanic

Date: 2025-03-06

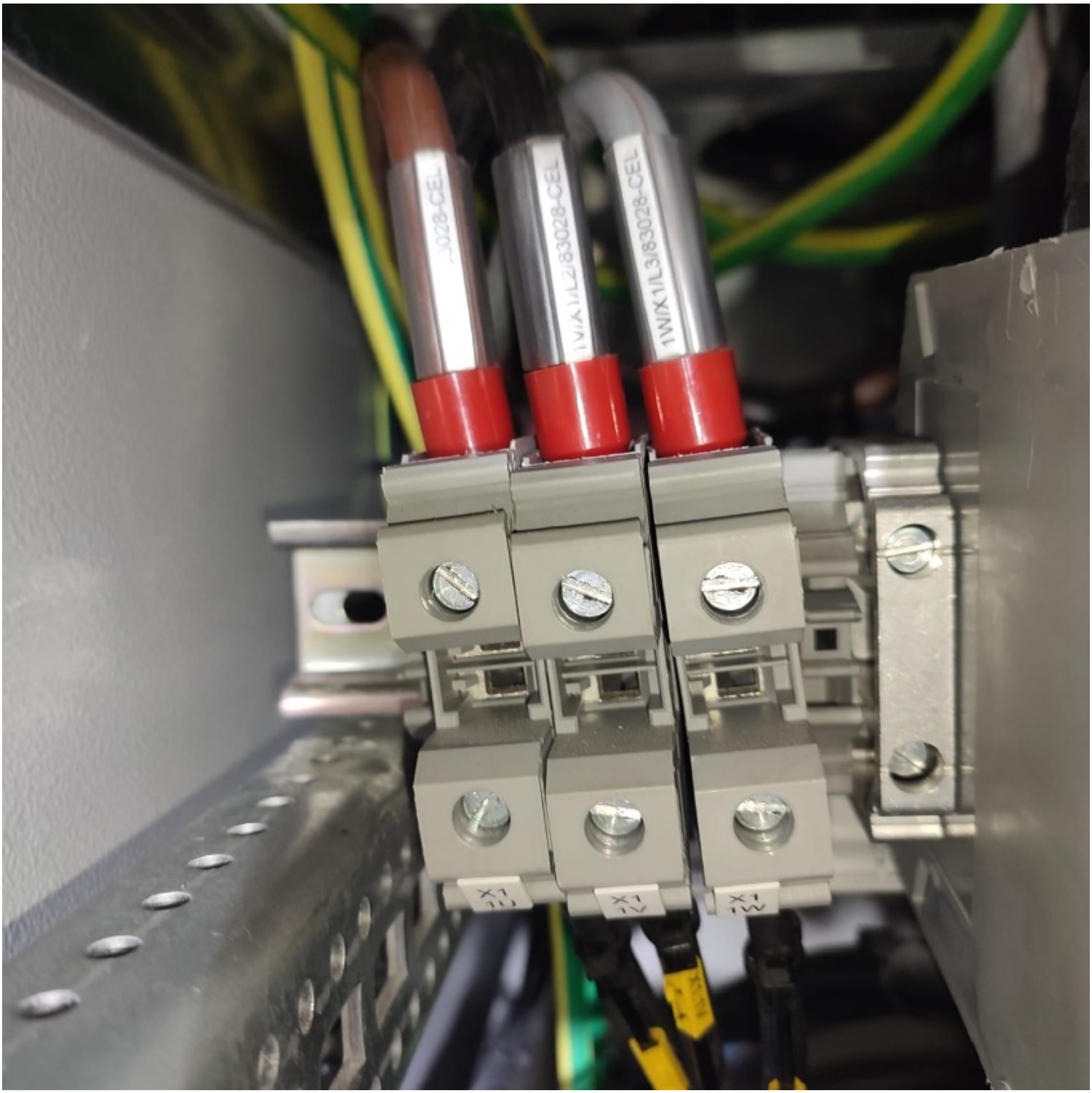
Signature: Digitaly signed by Josip Krizanic 2025-03-06T07:30:17.721Z

6- CLEARANCE APPROVAL

Name

Date

Signature


1W/X1/L3/83028-CEL
X1
X1
X1

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000290

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000553	1.4 Discipline	Electrical
1.2 Item	83028-CEL		LV Switchgear / AC UPS PAS - 30min - Line A
1.3 Subsystem	84-10		AC 35 kVA UPS System (UP-200F3)

2 - OBSERVATION

Identification tag of wire are wrong inside SG-200N1 (A3/+01)

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:29:05.620Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:29:16.684Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

installed.

Name: Giovanni Tangianu

Date: 2024-12-18

Signature: Digitaly signed by Giovanni Tangianu 2024-12-18T16:31:25.576Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000291

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000553	1.4 Discipline	Electrical
1.2 Item	83028-CEL	LV Switchgear / AC UPS PAS - 30min - Line A	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing cable tags on all routing (MCT of B-200_ B-300_ inside and outside UP-200F3)

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:33:07.742Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:33:18.718Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-01-31

Signature: Digitaly signed by Giovanni Tangianu 2025-01-31T10:38:38.938Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000292

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000553	1.4 Discipline	Electrical
1.2 Item	83028-CEL		LV Switchgear / AC UPS PAS - 30min - Line A
1.3 Subsystem	84-10		AC 35 kVA UPS System (UP-200F3)

2 - OBSERVATION

Plastic cable ties to be replaced on external routing

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:33:55.470Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:34:05.470Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature: Digitaly signed by Paolo Schintu 2025-02-26T12:37:03.535Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000293

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000646	1.4 Discipline	Electrical
1.2 Item	84332-CEL-1-P	AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing identification number on terminal strip X1+

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:54:13.357Z

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	2024-11-02
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:54:25.886Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Punch accepted by RM (Rosetti Marino).

Name: Giovanni Tangianu

Date: 2025-03-06

Signature: Digitaly signed by Giovanni Tangianu 2025-03-06T07:28:55.133Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000294

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000554	1.4 Discipline	Electrical
1.2 Item	83029-CEL	LV Switchgear / AC UPS PAS - 30min - Line B	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing cable tags on internal and external side of MCT of B-200/B-300

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:56:17.112Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:56:30.640Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-01-31

Signature: Digitaly signed by Giovanni Tangianu 2025-01-31T10:39:10.219Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000295

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000554	1.4 Discipline	Electrical
1.2 Item	83029-CEL	LV Switchgear / AC UPS PAS - 30min - Line B	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Plastic cable ties to be replaced on external routing

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:56:46.219Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:56:56.025Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature: Digitaly signed by Paolo Schintu 2025-02-26T12:37:10.597Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000296

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000554	1.4 Discipline	Electrical
1.2 Item	83029-CEL	LV Switchgear / AC UPS PAS - 30min - Line B	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Identification tag of wire are wrong inside SG-200N1 (A4/+01) and are missing inside UP-200F3 (X1/3W)

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T10:59:03.419Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T10:59:13.343Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

installed.

Name: Giovanni Tangianu

Date: 2024-12-18

Signature: Digitaly signed by Giovanni Tangianu 2024-12-18T16:31:49.226Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000297

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000554	1.4 Discipline	Electrical
1.2 Item	83029-CEL	LV Switchgear / AC UPS PAS - 30min - Line B	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing identification numbers on terminal strip inside UP-200F3 (X1/3U/3V/3W)

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:00:19.148Z

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	2024-11-02
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:00:31.249Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-04

Signature: Digitaly signed by Giovanni Tangianu 2025-02-04T13:00:02.833Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000298

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000555	1.4 Discipline	Electrical
1.2 Item	83030-CEL		LV Switchgear / AC UPS PAS - 30min - Bypass
1.3 Subsystem	84-10		AC 35 kVA UPS System (UP-200F3)

2 - OBSERVATION

Identification tag of wire are wrong or missing inside SG-200N1 (A7/+02)

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:02:14.384Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:02:31.066Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-01-31

Signature: Digitaly signed by Giovanni Tangianu 2025-01-31T10:39:33.333Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000299

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000555	1.4 Discipline	Electrical
1.2 Item	83030-CEL		LV Switchgear / AC UPS PAS - 30min - Bypass
1.3 Subsystem	84-10		AC 35 kVA UPS System (UP-200F3)

2 - OBSERVATION

Missing cable tags on internal and external side of MCT (B-200/B-300)

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:03:30.941Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:03:40.860Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-01-31

Signature: Digitaly signed by Giovanni Tangianu 2025-01-31T10:39:59.974Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000300

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000555	1.4 Discipline	Electrical
1.2 Item	83030-CEL		LV Switchgear / AC UPS PAS - 30min - Bypass
1.3 Subsystem	84-10		AC 35 kVA UPS System (UP-200F3)

2 - OBSERVATION

Plastic cable ties to be replaced on external routing

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:03:53.678Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:04:03.342Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature: Digitaly signed by Paolo Schintu 2025-02-26T12:37:20.385Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000301

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002343	1.4 Discipline	Electrical
1.2 Item	84330-CEC	Isolator Battery Box for AC UPS 35 kVA / AC UPS 35 kVA Redundant System with By-Pass	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing cable tag inside and outside CB-200F3A and on the top side of BC-200F3A

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:05:22.740Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:05:33.589Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:54:83.118Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000302

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002343	1.4 Discipline	Electrical
1.2 Item	84330-CEC	Isolator Battery Box for AC UPS 35 kVA / AC UPS 35 kVA Redundant System with By-Pass	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing identification number on terminal strip X15 (inside BC-200F3A)

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:05:56.541Z

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	2024-11-02
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:06:07.423Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Punch accepted by RM (Rosetti Marino).

Name: Giovanni Tangianu

Date: 2025-03-06

Signature: Digitaly signed by Giovanni Tangianu 2025-03-06T07:29:05.984Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000303

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000645	1.4 Discipline	Electrical
1.2 Item	84331-CEL-2-N	AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-A	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing cable tag inside CB-200F3A

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:06:41.174Z

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	2024-11-02
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:06:54.979Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature: Digitaly signed by Eleonora Carotenuto 2024-12-14T09:55:08.064Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000304

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000855	1.4 Discipline	Electrical
1.2 Item	CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing thermo shrink on internal earthing connections

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:07:15.279Z

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	2024-11-02
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:07:25.636Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Punch accepted by RM (Rosetti Marino).

Name: Giovanni Tangianu

Date: 2025-03-06

Signature: Digitaly signed by Giovanni Tangianu 2025-03-06T07:29:16.057Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000305

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000856	1.4 Discipline	Electrical
1.2 Item	CB-200F3B	Isolator Battery Box for AC UPS 35 kVA	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing thermo shrink on internal earthing connections

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:07:36.916Z

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	2024-11-02
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:07:46.763Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Punch accepted by RM (Rosetti Marino).

Name: Giovanni Tangianu

Date: 2025-03-06

Signature: Digitaly signed by Giovanni Tangianu 2025-03-06T07:29:27.250Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000306

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000848	1.4 Discipline	Electrical
1.2 Item	BA-200F3A	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing tag on battery bank

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:08:19.770Z

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	2024-11-02
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:08:31.632Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-04

Signature: Digitaly signed by Giovanni Tangianu 2025-02-04T12:59:30.800Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000307

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000849	1.4 Discipline	Electrical
1.2 Item	BA-200F3B	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing tag on battery bank

Name: Giovanni Tangianu

Date: 2024-11-02

Signature: Digitaly signed by Giovanni Tangianu 2024-11-02T11:08:41.053Z

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	2024-11-02
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2024-11-02T11:08:50.696Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-04

Signature: Digitaly signed by Giovanni Tangianu 2025-02-04T12:59:18.881Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000791

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004370	1.4 Discipline	Telecom
1.2 Item	UP-200F3/B400-NET-001.01	COMMUNICATION / EMCS SYSTEM	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Identification cable tag missing inside UP-200F3 connection.

Name: Giovanni Tangianu

Date: 2024-11-22

Signature: Digitaly signed by Giovanni Tangianu 2024-11-22T16:12:06.154Z

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	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-22T16:12:19.164Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-21

Signature: Digitaly signed by Giovanni Tangianu 2025-02-21T15:44:02.505Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000792

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004371	1.4 Discipline	Telecom
1.2 Item	UP-200F3/B400-NET-001.02	COMMUNICATION / EMCS SYSTEM	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Identification cable tag missing inside UP-200F3 connection.

Name: Giovanni Tangianu

Date: 2024-11-22

Signature: Digitaly signed by Giovanni Tangianu 2024-11-22T16:12:31.759Z

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	2024-11-22
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2024-11-22T16:12:42.047Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-21

Signature: Digitaly signed by Giovanni Tangianu 2025-02-21T15:44:10.940Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000880

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000197	1.4 Discipline	Instrumental
1.2 Item	C-CB-200F3A/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing cable tag outside B-400-SIS-001 panel

Name: Paolo Schintu

Date: 2024-11-25

Signature: Digitaly signed by Paolo Schintu 2024-11-25T14:34:54.792Z

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	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-25T14:35:05.855Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:24:54.919Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000881

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000198	1.4 Discipline	Instrumental
1.2 Item	C-CB-200F3B/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing cable tag outside B-400-SIS-001 panel

Name: Paolo Schintu

Date: 2024-11-25

Signature: Digitaly signed by Paolo Schintu 2024-11-25T14:36:09.486Z

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	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-25T14:36:20.522Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Done.

Name: Paolo Schintu

Date: 2024-12-11

Signature: Digitaly signed by Paolo Schintu 2024-12-11T15:25:04.892Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001057

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000196	1.4 Discipline	Instrumental
1.2 Item	UP-200F3/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing core identification tag by UP-200F3 side

Name: Paolo Schintu

Date: 2024-11-30

Signature: Digitaly signed by Paolo Schintu 2024-11-30T07:43:41.786Z

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	2024-11-30
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-30T07:43:51.982Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Punch accepted by RM (Rosetti Marino).

Name: Giovanni Tangianu

Date: 2025-03-06

Signature: Digitaly signed by Giovanni Tangianu 2025-03-06T07:30:05.386Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001058

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000196	1.4 Discipline	Instrumental
1.2 Item	UP-200F3/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	
1.3 Subsystem	84-10	AC 35 kVA UPS System (UP-200F3)	

2 - OBSERVATION

Missing SS cable tag

Name: Paolo Schintu

Date: 2024-11-30

Signature: Digitaly signed by Paolo Schintu 2024-11-30T07:45:56.155Z

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	2024-11-30
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Paolo Schintu 2024-11-30T07:46:06.990Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-01-31

Signature: Digitaly signed by Giovanni Tangianu 2025-01-31T10:45:11.776Z

6- CLEARANCE APPROVAL

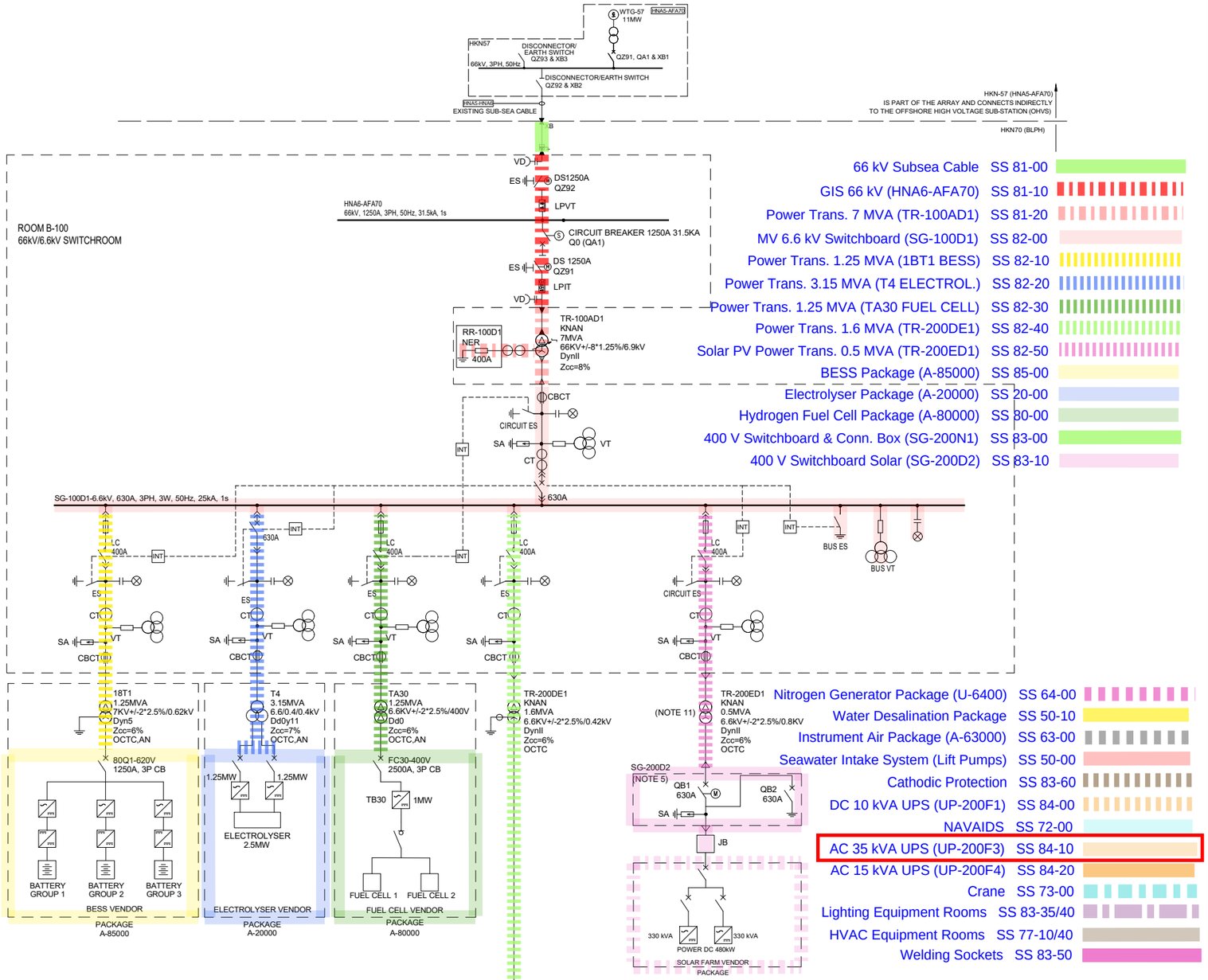
Name

Date

Signature

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

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



66 kV Subsea Cable	SS 81-00	
GIS 66 kV (HNA6-AFA70)	SS 81-10	
Power Trans. 7 MVA (TR-100AD1)	SS 81-20	
MV 6.6 kV Switchboard (SG-100D1)	SS 82-00	
Power Trans. 1.25 MVA (1BT1 BESS)	SS 82-10	
Power Trans. 3.15 MVA (T4 ELECTROL.)	SS 82-20	
Power Trans. 1.25 MVA (TA30 FUEL CELL)	SS 82-30	
Power Trans. 1.6 MVA (TR-200DE1)	SS 82-40	
Solar PV Power Trans. 0.5 MVA (TR-200ED1)	SS 82-50	
BESS Package (A-85000)	SS 85-00	
Electrolyser Package (A-20000)	SS 20-00	
Hydrogen Fuel Cell Package (A-80000)	SS 80-00	
400 V Switchboard & Conn. Box (SG-200N1)	SS 83-00	
400 V Switchboard Solar (SG-200D2)	SS 83-10	
Nitrogen Generator Package (U-6400)	SS 64-00	
Water Desalination Package	SS 50-10	
Instrument Air Package (A-63000)	SS 63-00	
Seawater Intake System (Lift Pumps)	SS 50-00	
Cathodic Protection	SS 83-60	
DC 10 kVA UPS (UP-200F1)	SS 84-00	
NAVAIDS	SS 72-00	
AC 35 kVA UPS (UP-200F3)	SS 84-10	
AC 15 kVA UPS (UP-200F4)	SS 84-20	
Crane	SS 73-00	
Lighting Equipment Rooms	SS 83-35/40	
HVAC Equipment Rooms	SS 77-10/40	
Welding Sockets	SS 83-50	

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

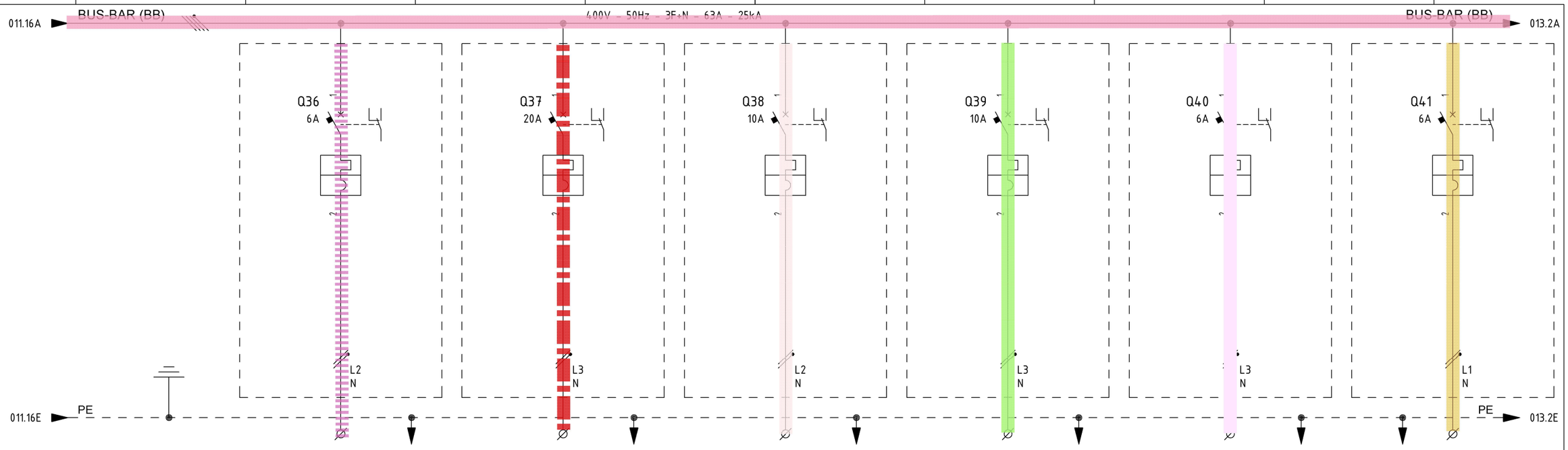
TITLE :

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

01

File Name : 123A90-DDL-EL-DG-20158_REV01.dwg



ITEM			1	CP-200E2	CP-100E1	SG-100D1	SG-200N1	SG-200D2	UP-200F3
UTILITY			2	AUXILIARY TRAFO SOLARE 0.5MVA	AUXILIARY GIS	AUXILIARY 6.6KV SWITCHBOARD	AUXILIARY LV SWITCHBOARD	AUXILIARY LV SWITCHBOARD 800/460V	AC UPS PAS AUXILIARY
CUBICLE			3	+03	+03	+03	+03	+03	+03
RATED POWER | RATED CURRENT			4/5	0.5 KW | 2.72 A	3 KW | 16.3 A	1 KW | 5.43 A	1 KW | 5.43 A	0.5 KW | 2.72 A	0.2 KW | 0.82 A
TYPICAL FUNCTIONAL			6	-	-	-	-	-	-
CIRCUIT BREAKER (ABB)	TYPE		7	S302P-C6	S302P-C20	S302P-C10	S302P-C10	S302P-C6	S302P-C6
	VERSION		8	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE	2P / MINIATURE
	TRIP UNITS		9	In=6A - Curve C	In=20A - Curve C	In=10A - Curve C	In=10A - Curve C	In=6A - Curve C	In=6A - Curve C
	Icu	KA	10	25kA	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	-	-	-	-	-	-
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 / 6	SCREW / 4	SCREW / 4	SCREW / 4	SCREW / 4
POWER CONDUCTOR		mm²	31	3G2.5	3G6	3G2.5	3G2.5	3G2.5	3G2.5

SUBSYSTEM 82-50 | SUBSYSTEM 81-10 | SUBSYSTEM 82-00 | SUBSYSTEM 83-00 | SUBSYSTEM 83-10 | SUBSYSTEM 84-10

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)

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

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

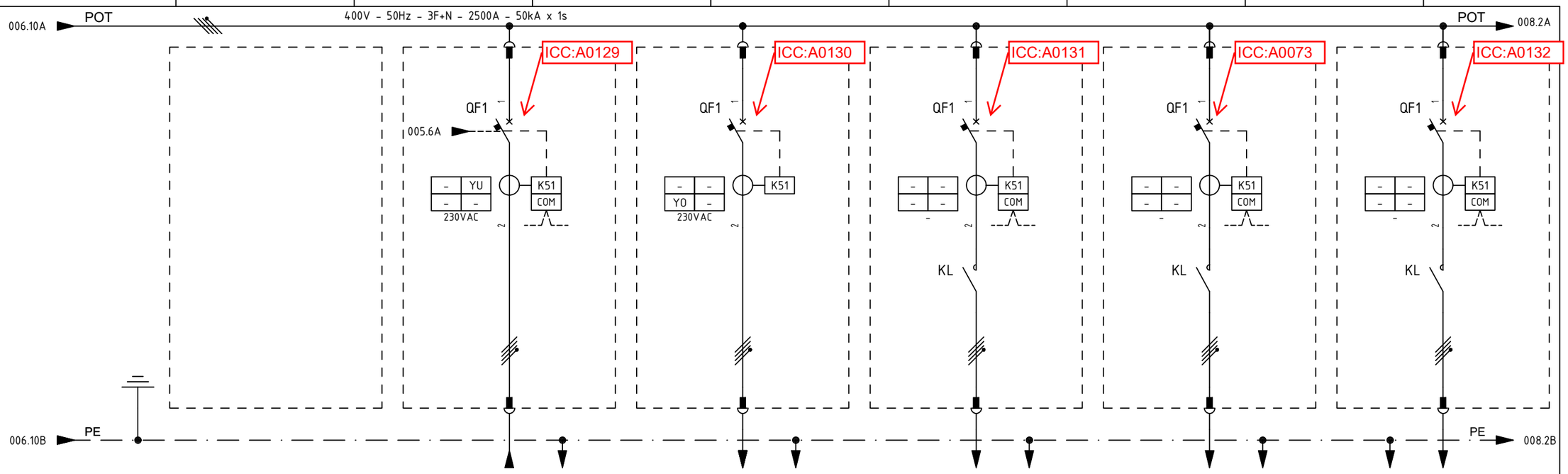
DRAWING NO. 1723002197-EL-DG-00013

SHEET 012

REV. 03

F.to UNI A3: 420mmx297mm

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



ITEM				JB-200E2	UP-200F3	SPARE	DP-200N1	JB-200E3
UTILITY			2	TEMPORARY GENERATOR / MOBILE BATTERY PACK	AC UPS PAS - 30 MIN UP-200F3 - LINE A	SPARE	DB - LIGHTING & SMALL POWER - BoP	CRANE
COLUMN/CUBICLE			3	A2 / +08	A3 / +01	A3 / +02	A3 / +03	A3 / +04
RATED POWER | RATED CURRENT			4/5	138 kW | 210 A	36.0 kW | 57.8 A	- kW | - A	15.35 kW | 23.7 A	25 kW | 37.8 A
TYPICAL FUNCTIONAL			6	LE2-320	L1-100	LK1-40	LK1-100	LK1-63
CIRCUIT BREAKER (ABB)	TYPE		7	XT5S - 400	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160
	VERSION		8	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 320A)	EKIP DIP LSIG (In = 100A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 100A)	EKIP HI TOUCH LSIG (In = 63A)
	Icu	KA	10	50 kA	50 kA	50 kA	50 kA	50 kA
OVERLOAD	L	Range A	11	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In
		Range t	12	k/I^2	k/I^2	k/I^2	k/I^2	k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In	(1 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In
		Range t	14	0.05 - 0.4 sec / k/I^2	0.05 - 0.4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In	(1 - 10) x In	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In
		Range t	16	instantaneous	<= 0.02 sec	instantaneous	instantaneous	instantaneous
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In	(0.2 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In
		Range t	18	t=k / t=k/I^2	0.1 - 0.8 sec	t=k / t=k/I^2	t=k / t=k/I^2	t=k / t=k/I^2
CONTACTOR (ABB)			19	-	-	AF40-40-00-13 (70A-AC1); 100-250VAC/DC	AF80-40-00-13 (70A-AC1); 100-250VAC/DC	AF52-40-00-13 (100A-AC1); 100-250VAC/DC
THERMAL OVERLOAD RELAY (ABB)			20	-	-	-	-	-
SURGE ARRESTER (DEHN)			21	-	-	-	-	-
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-	-	-	-
FUSE HOLDER (ITALWEBER)			23	SUBSISTEM 83.00	SUBSISTEM 84.10	SUBSISTEM 83.00	SUBSISTEM 83.20	SUBSISTEM 99.00
INDIRECT PROTECTION (ABB)			24					
VOLTMETER			25					
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	-	-	-	-
	PERFORMANCE/CLASS		27	-	-	-	-	-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	-	-	-	-
	PERFORMANCE/CLASS		29	-	-	-	-	-
LOCK-OUT RELAY (-)			30	-	-	-	-	-
POWER CONDUCTOR		mmq	31	5 x (1 x 95)	4G35	-	5G50	5G16

/ SYSTEM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

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DWG n° : 231298/SD/11

Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

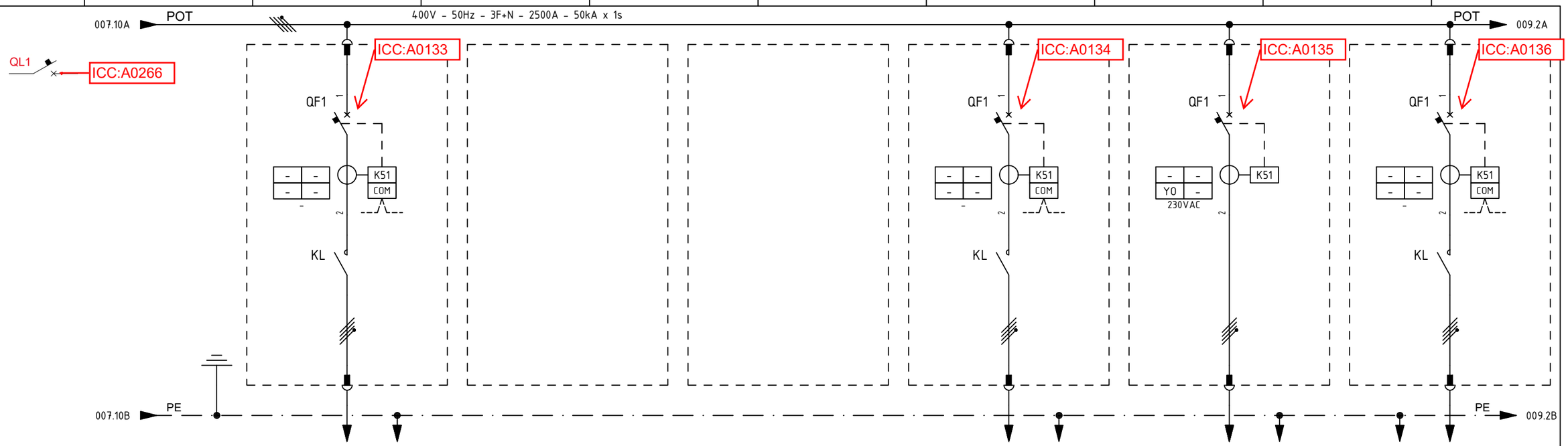
DRAWING NO. 1723002197-EL-DG-00011

SHEET 007

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 03



ITEM			1	SPARE		-			JB-500E8		UP-200F3		B100-HSB-001	
UTILITY			2	SPARE		FUTURE			WATER PACKAGE		AC UPS PAS - 30 MIN UP-200F3 - LINE B		HVAC PANELS HV ROOM	
COLUMN/CUBICLE			3	A3 / +05		A3 / +06			A3 / +08		A4 / +01		A4 / +02	
RATED POWER | RATED CURRENT			4/5	5.5 kW	9.93 A	-	-		67 kW	107.00 A	36.0 kW	57.8 A	18 kW	34.1 A
TYPICAL FUNCTIONAL			6	LK1-40					LK2-160		L1-100		LK1-40	
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160					XT4S - 250		XT2S - 160		XT2S - 160	
	VERSION		8	4P - FIXED					4P - FIXED		4P - FIXED		4P - FIXED	
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 40A)					EKIP HI TOUCH LSIG (In = 160A)		EKIP DIP LSIG (In = 100A)		EKIP HI TOUCH LSIG (In = 40A)	
	Icu	KA	10	50 kA					50 kA		50 kA		50 kA	
OVERLOAD	L	Range A	11	(0.4 - 1) x In					(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In	
		Range t	12	k/I^2					k/I^2		k/I^2		k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In					(0.6 - 10) x In		(1 - 10) x In		(0.6 - 10) x In	
		Range t	14	0.05 - 0,4 sec / k/I^2					0.05 - 0.4 sec / k/I^2		0.05 - 0.4 sec / k/I^2		0.05 - 0,4 sec / k/I^2	
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In					(1.5 - 15) x In		(1 - 10) x In		(1.5 - 15) x In	
		Range t	16	instantaneous					instantaneous		<= 0.02 sec		instantaneous	
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In					(0.1 - 1) x In		(0.2 - 1) x In		(0.1 - 1) x In	
		Range t	18	t=k / t=k/I^2					t=k / t=k/I^2		0.1 - 0.8 sec		t=k / t=k/I^2	
CONTACTOR (ABB)			19	AF40-40-00-13 (70A-AC1); 100-250VAC/DC					AF190-40-11-13 (275A-AC1); 100-250 VAC/DC		-		AF40-40-00-13 (70A-AC1); 100-250VAC/DC	
THERMAL OVERLOAD RELAY (ABB)			20	-					-		-		-	
SURGE ARRESTER (DEHN)			21	-					-		-		-	
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-					-		-		-	
FUSE HOLDER (ITALWEBER)			23	SUBSISTEM 83.00					SUBSISTEM 50.10		SUBSISTEM 84.10		SUBSISTEM 77.10	
INDIRECT PROTECTION (ABB)			24											
VOLTMETER			25											
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-					-		-		-	
	PERFORMANCE/CLASS		27	-					-		-		-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-					-		-		-	
	PERFORMANCE/CLASS		29	-					-		-		-	
LOCK-OUT RELAY (-)			30	-					-		-		-	
POWER CONDUCTOR		mmq	31	-					5G70		4G35		5G16	

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DWG n° : 231298/SD/11
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

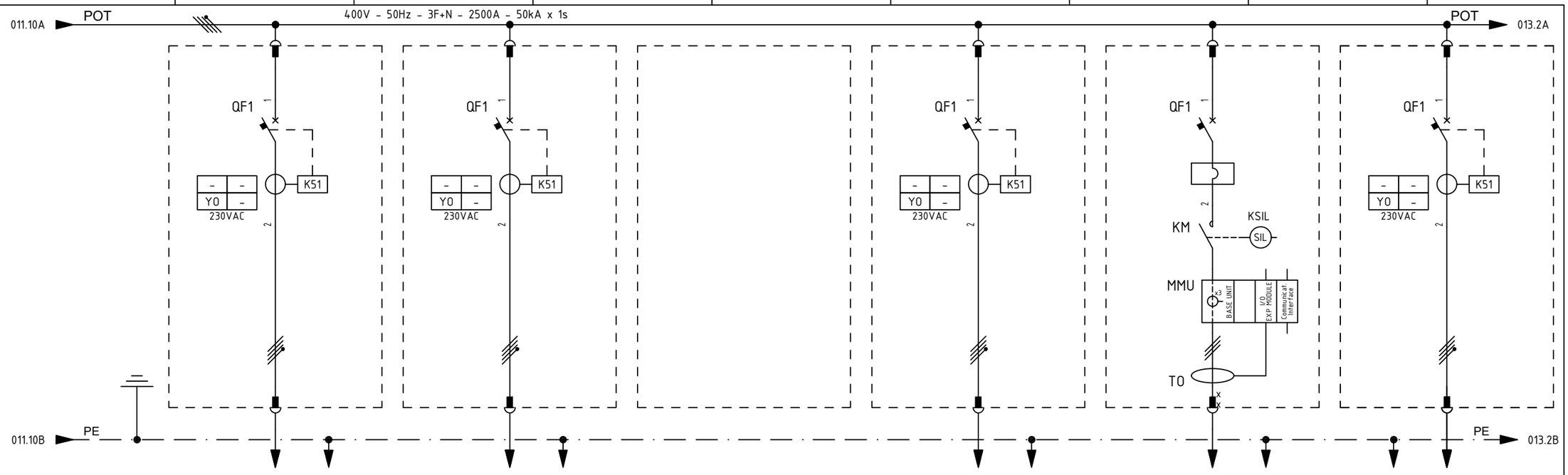
DRAWING NO. 1723002197-EL-DG-00011

SHEET 008

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 03



ITEM			1	UP-200F4	UP-200F4		ESW-200N1	PM-50001 A	UP-200F3
UTILITY			2	AC UPS F&G - 8 H UP-200F4 - LINE A	AC UPS F&G - 8h UP-200F4 - LINE B		WELDING SOCKETS (TOP DECK)	SEA WATER PUMP A	AC UPS PAS - 30 min. UP-200F3 - BYPASS
COLUMN/CUBICLE			3	A6 / +05	A6 / +06		A6 / +08	A7 / +01	A7 / +02
RATED POWER | RATED CURRENT			4/5	18 kW | 28.9 A	18 kW | 28.9 A		69.84 kW | 126.15 A	6.1 kW | 11.0 A	36 kW | 57.8 A
TYPICAL FUNCTIONAL			6	L1-63	L1-63		L2-160	M1-6	L1-100
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160	XT2S - 160		XT4S - 250	XT2S - 160	XT2S - 160
	VERSION		8	4P - FIXED	4P - FIXED		4P - FIXED	3P - FIXED	4P - FIXED
	TRIP UNITS		9	EKIP DIP LSIG (In = 63A)	EKIP DIP LSIG (In = 63A)		EKIP DIP LSIG (In = 160A)	MA (In = 20A)	EKIP DIP LSIG (In = 100A)
	Icu	KA	10	50 kA	50kA		50kA	-	50 kA
OVERLOAD	L	Range A	11	(0.4 - 1) x In	(0.4 - 1) x In		(0.4 - 1) x In	-	(0.4 - 1) x In
		Range t	12	k/I^2	k/I^2		k/I^2	-	k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(1 - 10) x In	(1 - 10) x In		(1 - 10) x In	-	(1 - 10) x In
		Range t	14	0.05 - 0.4 sec / k/I^2	0.05 - 0.4 sec / k/I^2		0.05 - 0.4 sec / k/I^2	-	0.05 - 0.4 sec / k/I^2
INST. SHORT-CIRCUIT	I	Range A	15	(1 - 10) x In	(1 - 10) x In		(1 - 10) x In	(6 - 14) x I	(1 - 10) x In
		Range t	16	<= 0.02 sec	<= 0.02 sec		<= 0.02 sec	<= 0.02 sec	<= 0.02 sec
EARTH FAULT PROTECTION	G	Range A	17	(0.2 - 1) x In	(0.2 - 1) x In		(0.2 - 1) x In	-	(0.2 - 1) x In
		Range t	18	0.1 - 0.8 sec	0.1 - 0.8 sec		0.1 - 0.8 sec	-	0.1 - 0.8 sec
CONTACTOR (ABB)			19	-	-		-	AF38-30-00-13 (18.5 kW - AC3) - 100-250Vac/dc	-
THERMAL OVERLOAD RELAY (ABB)			20	-	-		-	UMC100.3 UC (0.24 - 63A)	-
SURGE ARRESTER (DEHN)			21	-	-		-	-	-
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-		-	-	-
FUSE HOLDER (ITALWEBER)			23	SUBSISTEM 84.20	SUBSISTEM 84.20		SUBSISTEM 83.50	SUBSISTEM 50.00	SUBSISTEM 84.10
INDIRECT PROTECTION (ABB)			24						
VOLTMETER			25						
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	-		-	-	-
	PERFORMANCE/CLASS		27	-	-		-	-	-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	-		-	-	-
	PERFORMANCE/CLASS		29	-	-		-	-	-
LOCK-OUT RELAY (-)			30	-	-		-	-	-
POWER CONDUCTOR		mmq	31	4G35	4G35		5G50	4G4	4G35

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DWG n° : 231298/SD/11
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

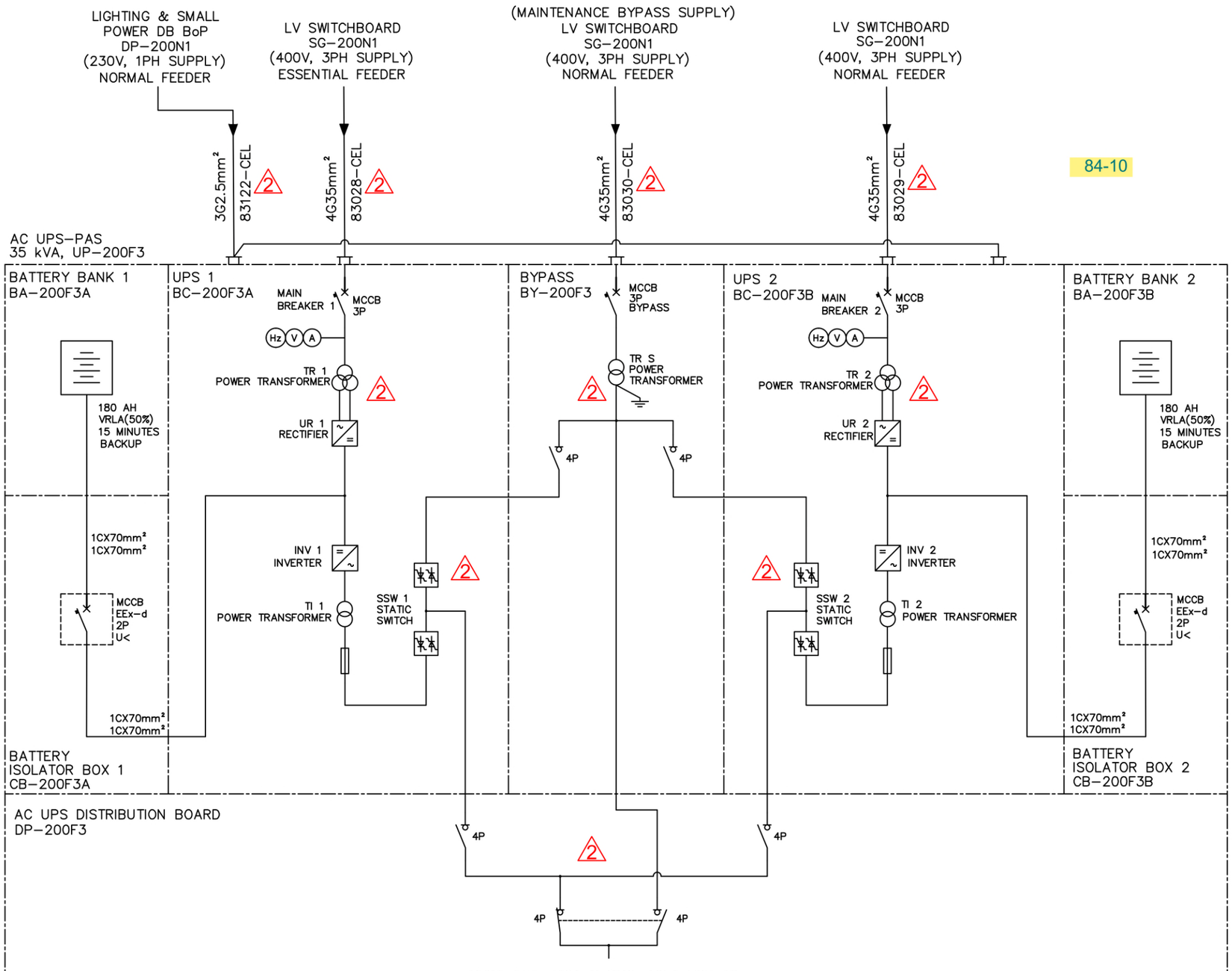
DRAWING NO. 1723002197-EL-DG-00011

SHEET 012

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 03



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	27/09/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	12/04/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/02/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS AC UPS SYSTEMS
AC UPS – PAS SINGLE LINE DIAGRAM(UP–200F3)

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

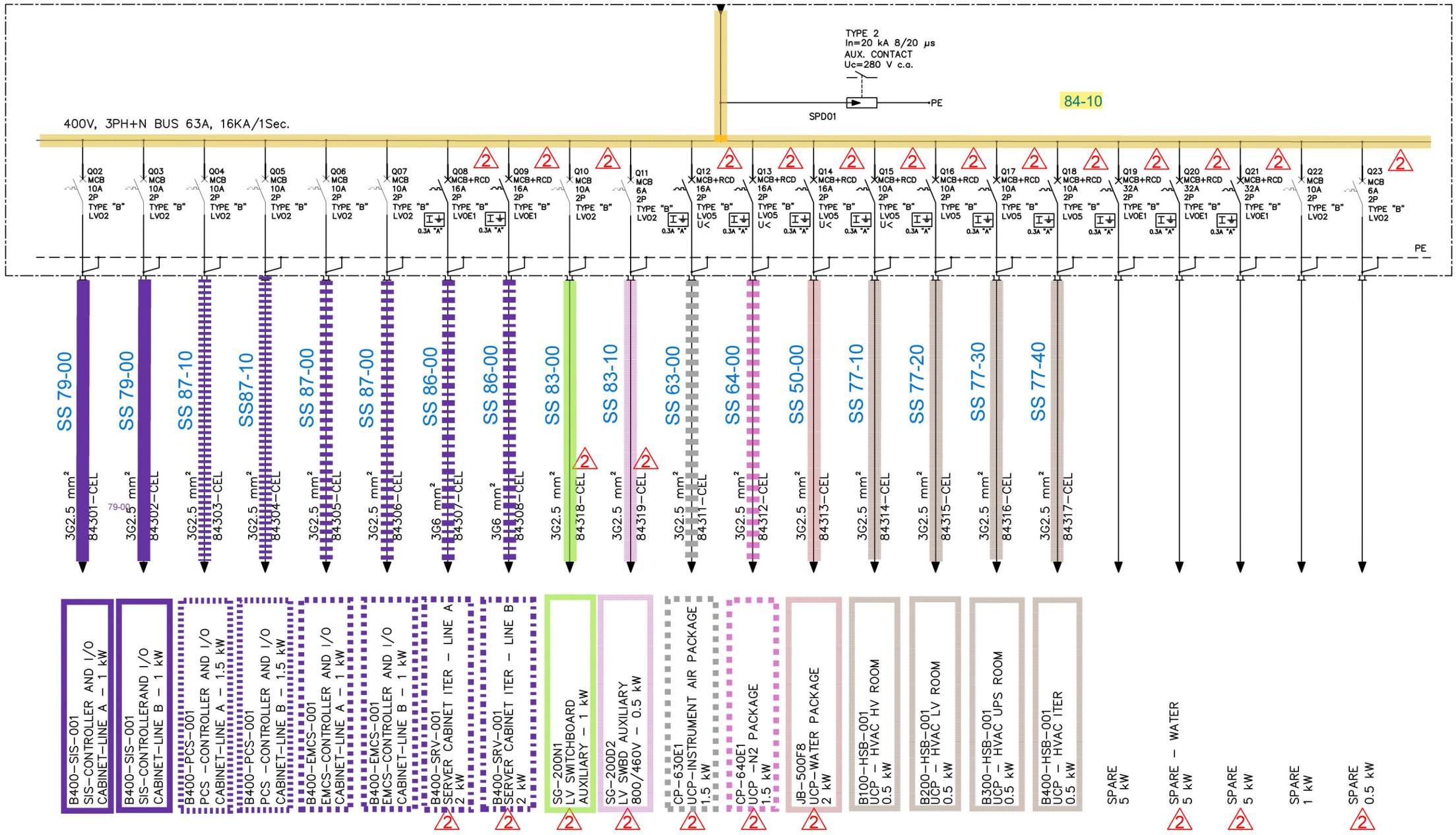
A3 | DRAWING NO. 123A90–DDL–EL–DG–20160 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20160 Rev. 02

AC UPS – PAS SINGLE LINE DIAGRAM(UP–200F3) DISTRIBUTION BOARD DETAILS

AC UPS DISTRIBUTION BOARD–PAS
DP–200F3



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	27/09/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	12/04/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/02/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS AC UPS SYSTEMS
AC UPS – PAS DISTRIBUTION BOARD SLD (UP–200F3)

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

SCALE : 1:X

A3

DRAWING NO. 123A90–DDL–EL–DG–20160

SHEET 005

REV. 02

File Name : 123A90–DDL–EL–DG–20160 Rev. 02

F.to UNI A3: 420mmx297mm

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: 84-10 & process: MC & discipline : E

Electrical	84-10 AC 35 kVA UPS System (UP-200F3)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83028-CEL	LV Switchgear / AC UPS PAS - 30min - Line A	ONSHORE	C10000553	CPX09	100	2024-11-02	RFC 1
83029-CEL	LV Switchgear / AC UPS PAS - 30min - Line B	ONSHORE	C10000554	CPX09	100	2024-11-02	RFC 1
83030-CEL	LV Switchgear / AC UPS PAS - 30min - Bypass	ONSHORE	C10000555	CPX09	100	2024-11-02	RFC 1
83122-CEL	Lighting & Small Power DB BoP / AC UPS PAS AUXILIARY	ONSHORE	C10000641	CPX09	100	2024-10-24	RFC 1
84330-CEC	Isolator Battery Box for AC UPS 35 kVA / AC UPS 35 kVA Redundant System with By-Pass	ONSHORE	C10002343	CPX10	100	2024-11-02	RFC 1
84331-CEC	Isolator Battery Box for AC UPS 35 kVA / AC UPS 35 kVA Redundant System with By-Pass	ONSHORE	C10002344	CPX10	100	2024-11-02	RFC 1
84331-CEL-1-N	AC UPS PAS - Charger-A / AC UPS PAS - Battery Isolator-A	ONSHORE	C10000643	CPX09	100	2024-11-02	RFC 1
84331-CEL-1-P	AC UPS PAS - Charger-A / AC UPS PAS - Battery Isolator-A	ONSHORE	C10000642	CPX09	100	2024-11-02	RFC 1
84331-CEL-2-N	AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-A	ONSHORE	C10000645	CPX09	100	2024-11-02	RFC 1
84331-CEL-2-P	AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-A	ONSHORE	C10000644	CPX09	100	2024-11-02	RFC 1
84332-CEL-1-N	AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B	ONSHORE	C10000647	CPX09	100	2024-11-02	RFC 1
84332-CEL-1-P	AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B	ONSHORE	C10000646	CPX09	100	2024-11-02	RFC 1
84332-CEL-2-N	AC UPS PAS - Battery Isolator-B / AC UPS PAS - Battery-B	ONSHORE	C10000649	CPX09	100	2024-11-02	RFC 1
84332-CEL-2-P	AC UPS PAS - Battery Isolator-B / AC UPS PAS - Battery-B	ONSHORE	C10000648	CPX09	100	2024-11-02	RFC 1
BA-200F3A	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	ONSHORE	C10000848	CPX17	100	2024-11-02	RFC 1
BA-200F3B	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	ONSHORE	C10000849	CPX17	100	2024-11-02	RFC 1
CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	ONSHORE	C10000855	CPX00	100	2024-11-02	RFC 1
CB-200F3B	Isolator Battery Box for AC UPS 35 kVA	ONSHORE	C10000856	CPX00	100	2024-11-02	RFC 1
UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	ONSHORE	C10000871	CPX16	100	2024-11-02	RFC 1

ITEM	Tag	83028-CEL	: LV Switchgear / AC UPS PAS - 30min - Line A		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)		Module	LD_B-200/LD_B-300	
TASK	code	C10000553	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: 4G35 mm2 | Color: Grey

From: SG-200N1 | To: UP-200F3

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	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	83028-CEL	: LV Switchgear / AC UPS PAS - 30min - Line A			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-200/LD_B-300
TASK	code	C10000553		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		NA	
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	316	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

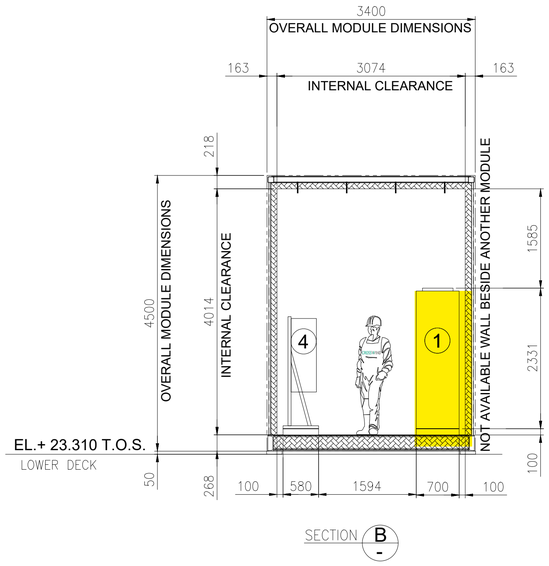
TESTING INSTRUMENTS USED

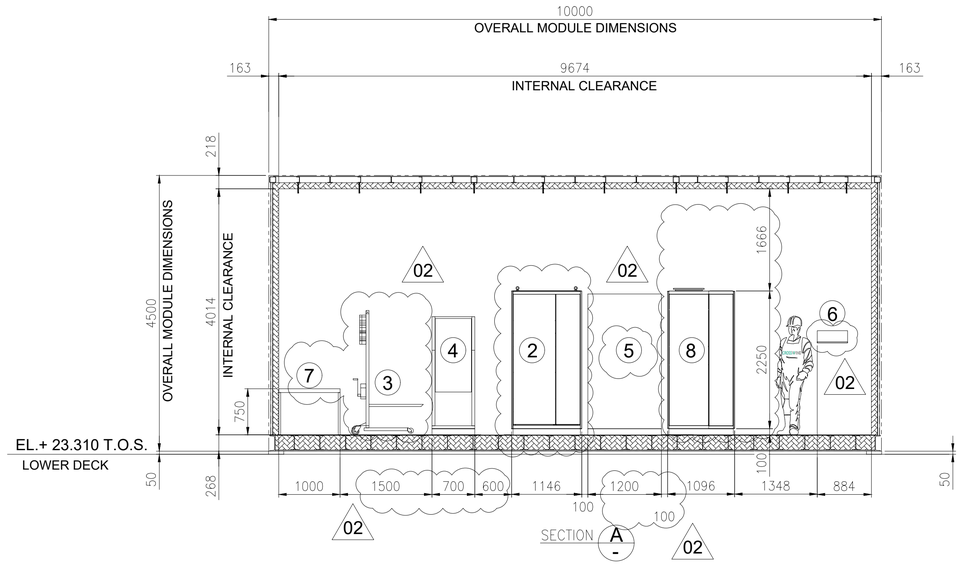
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

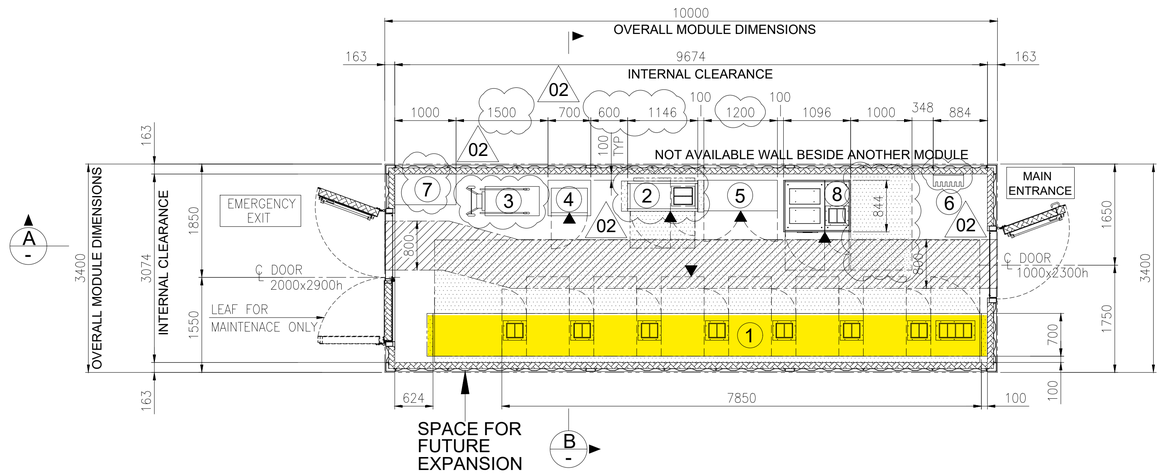
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-22	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-22T11:57:14.239Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:34:29.518Z	

DRAWING NO. 123A90-DDL-EL-DL-20105 REV. 02





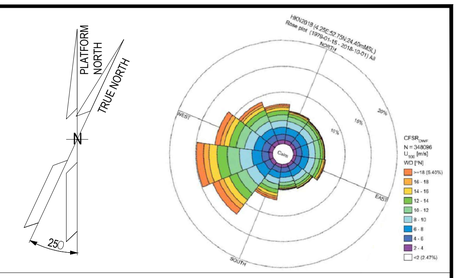


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

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

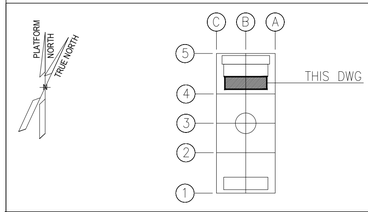
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

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



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	DYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20105**

REV.:	DATE:	SIGNATURE:
2_A	08/08/24	G.Randi

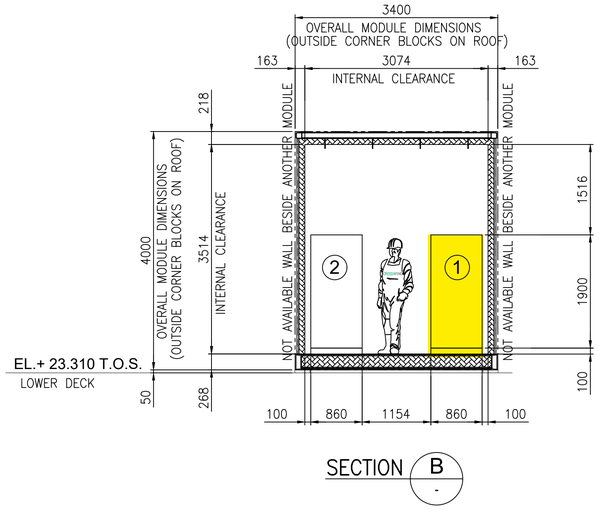
ROSETTI MARINO SpA

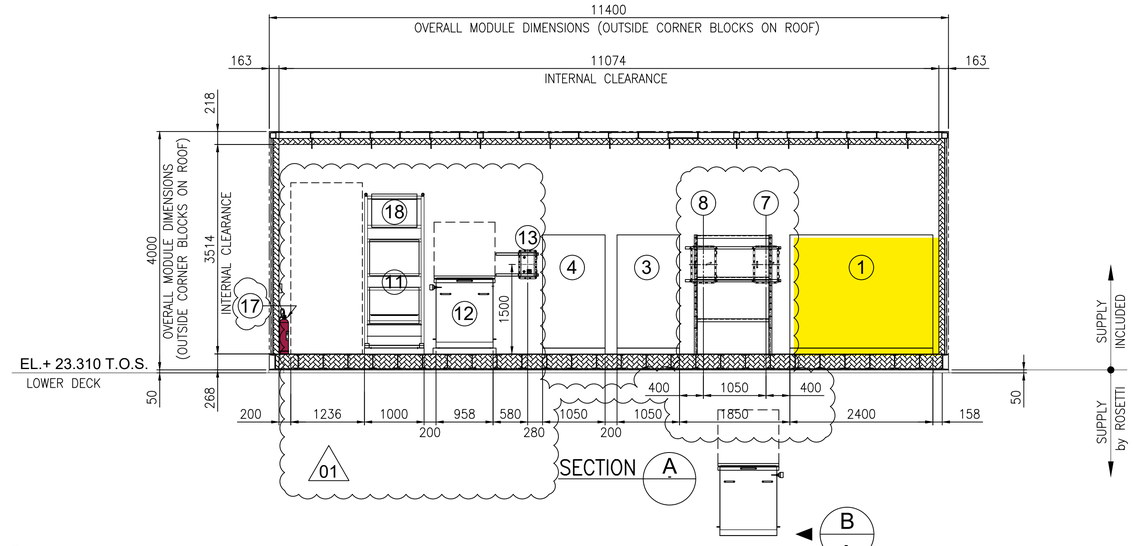
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

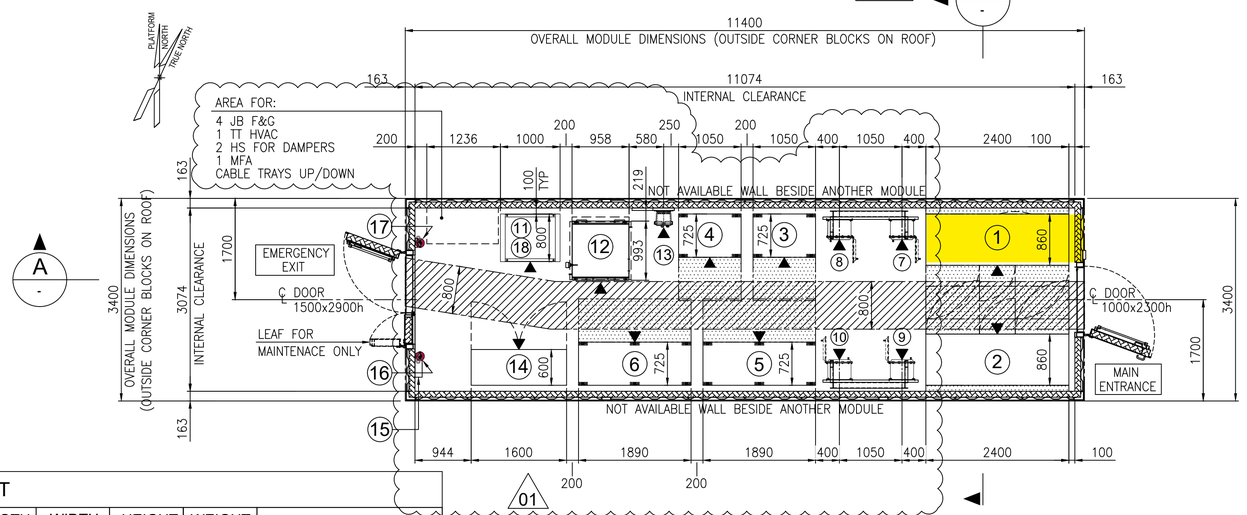
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN FMO	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024

A1	DRAWING NO. 123A90-DDL-EL-DL-20105	SHEET 001	REV. 02

File Name : 123A90-DDL-EL-DL-20105_REV02.dwg







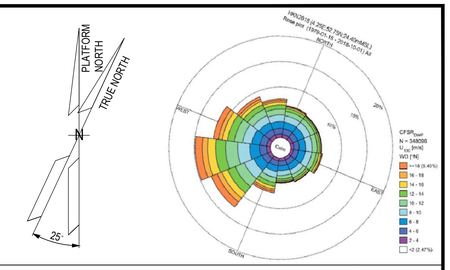
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

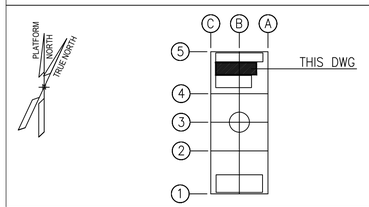
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

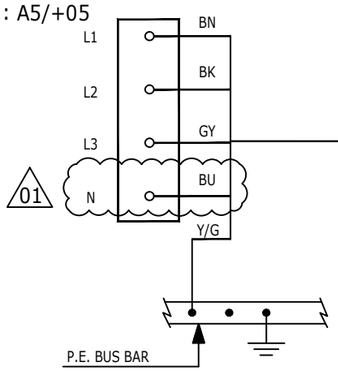
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File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

FROM	TO

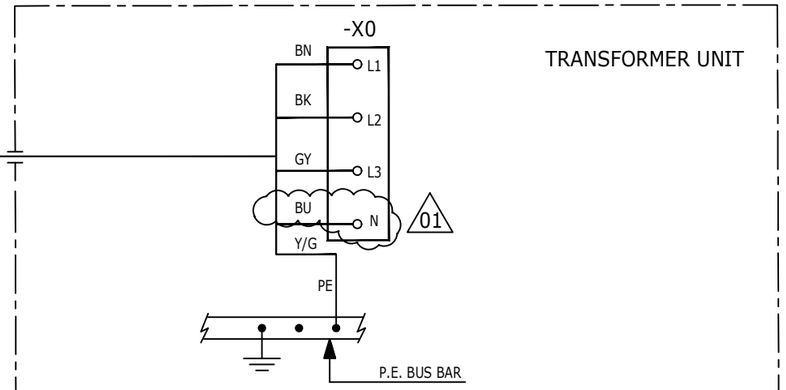
DESCRIPTION: LV Switchgear
TAG NUMBER: SG-200N1

COLUMN/CUBIC.: A5/+05

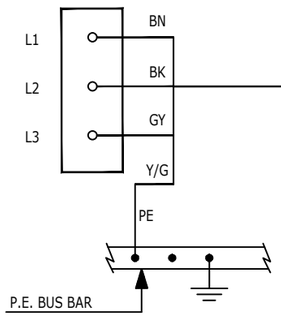


83027-CEL
5G16 mm²
01

DESCRIPTION: IMPRESSED CURRENT CATHODIC PROTECTION (ICCP) SYSTEM
TAG NUMBER: CN-200N1

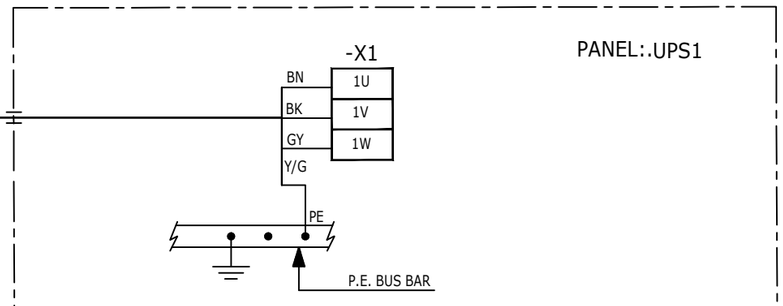


COLUMN/CUBIC.: A3/+01



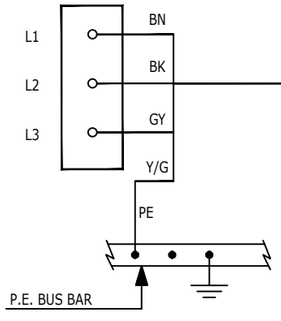
83028-CEL
4G35 mm²

DESCRIPTION: AC UPS PAS - 30MIN - LINE A
TAG NUMBER: UP-200F3

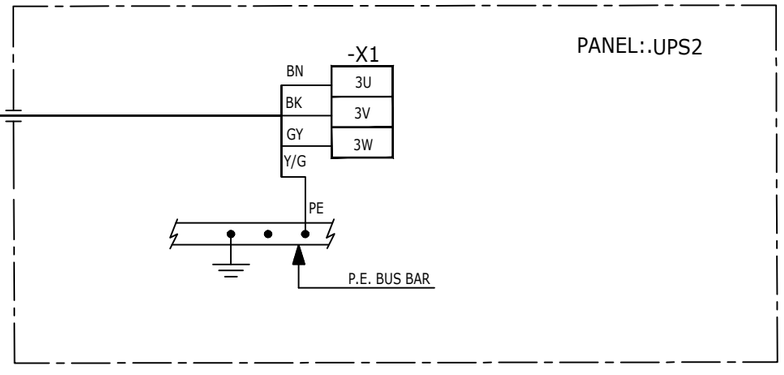


DESCRIPTION: AC UPS PAS - 30MIN - LINE B
TAG NUMBER: UP-200F3

COLUMN/CUBIC.: A4/+01



83029-CEL
4G35 mm²



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20149**

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
LV SWITCHGEAR SG-200N1

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

SCALE : 1:X

A3

DRAWING NO. 123A90-DDL-EL-DG-20149

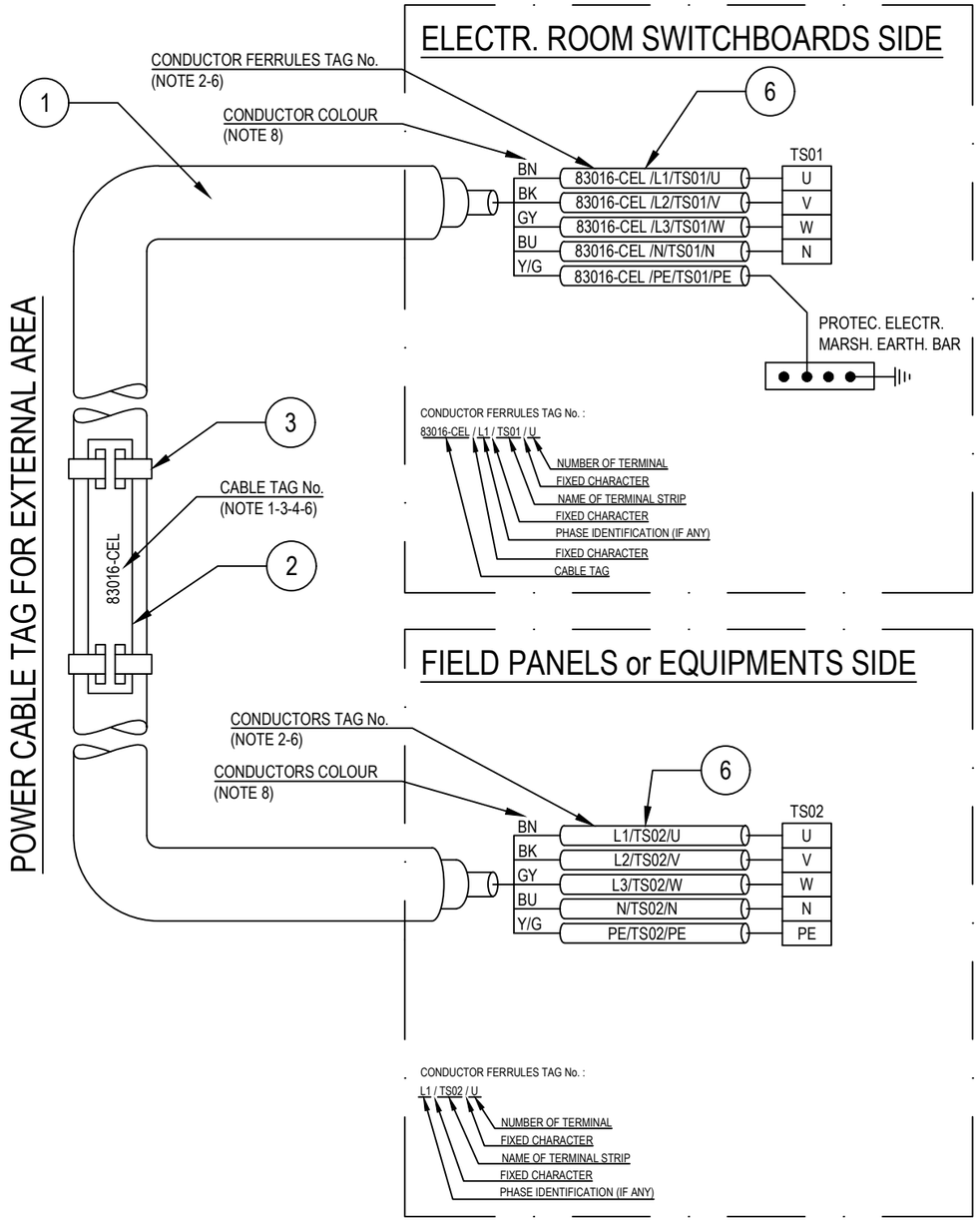
SHEET 027

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20162 Rev. 01

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.

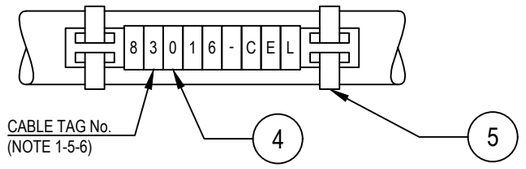
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

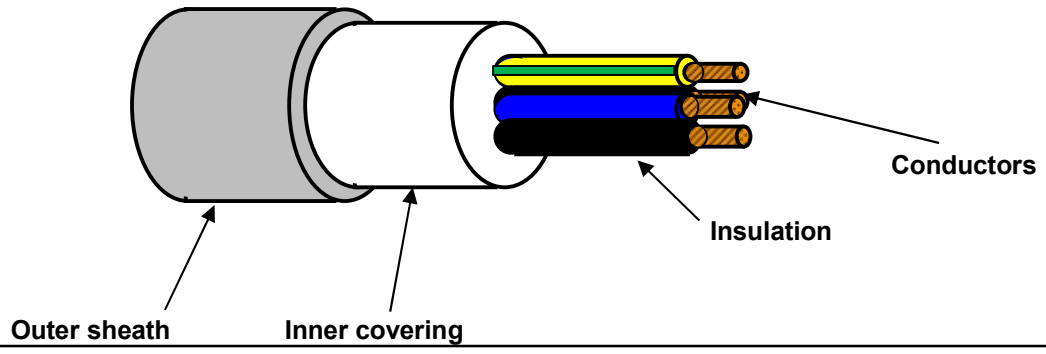
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Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
83028-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						SG-200N1	LV 0,4 kV MCC Switchgear	Lower Deck (B-200)	UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	ELECV09-4G35	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 4G35mm² - Grey	n.a.			T1_M40_Single				L-450-101-LVT-028 / L-600-101-LVT-017 / L-600-101-LVT-018 / L-600-101-LVT-020 / E-MCT-204 / L-600-101-LVT-010 / L-450-101-LVT-005 / E-MCT-302 / L-600-101-LVT-035 / L-600-101-LVT-038 / L-600-101-LVT-036 / L-450-101-LVT-040

FLEI s.r.l.

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

4G35 - L.V. POWER CABLE - Flame Retardant



TECHNICAL FEATURES

Conductors :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	EPR compound, quality to IEC 60092.360, Nominal Thickness 1,2 mm	
Cores colour code :	**Black - Brown - Grey - 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 1,5 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G35 SQMM - EPR/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 -**	
	Year of Manufacture - CE + Meter Marking	
Outer diameter :	(27,4 ± 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 :	≥ 480 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.

ITEM	Tag	83029-CEL	: LV Switchgear / AC UPS PAS - 30min - Line B		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)		Module	LD_B-200/LD_B-300	
TASK	code	C10000554	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: 4G35 mm2 | Color: Grey

From: SG-200N1 | To: UP-200F3

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.	PL
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"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	83029-CEL	: LV Switchgear / AC UPS PAS - 30min - Line B			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-200/LD_B-300
TASK	code	C10000554		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		NA	
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	

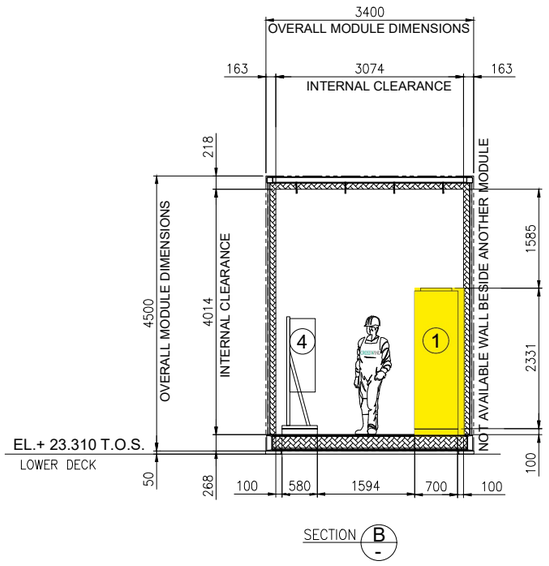
TESTING INSTRUMENTS USED

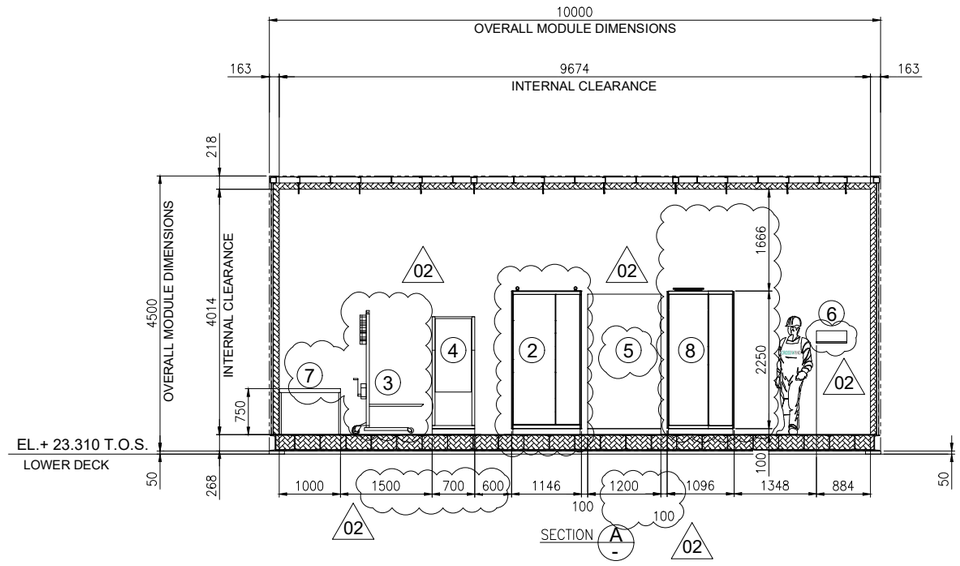
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

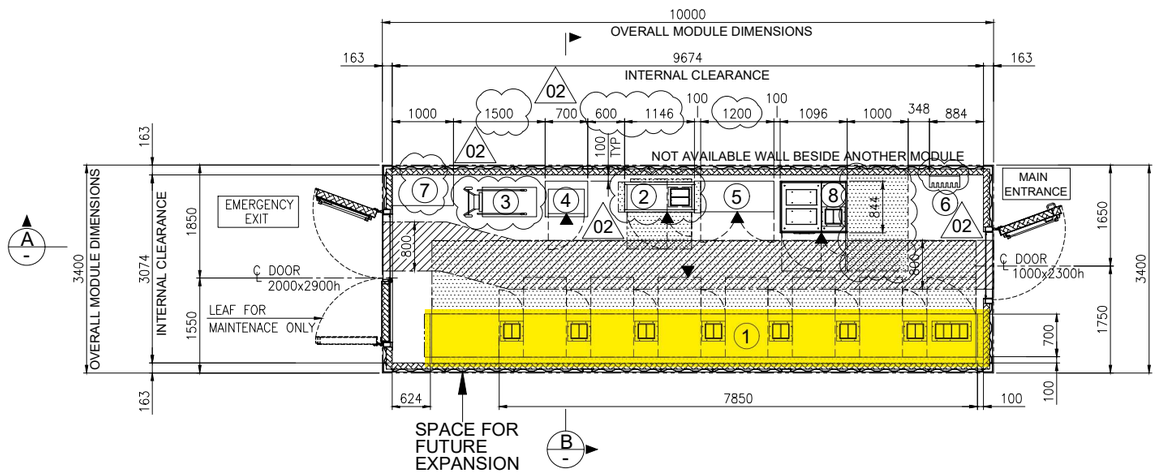
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-21	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-21T17:23:25.076Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:35:22.512Z	

DRAWING NO. 123A90-DDL-EL-DL-20105 | REV. 02





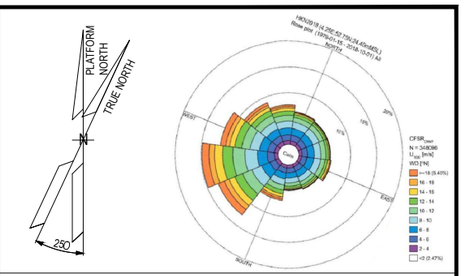


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

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

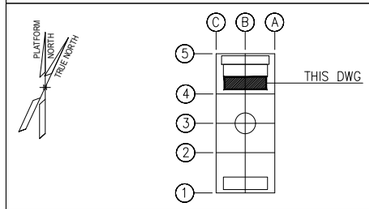
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

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.:	DATE:	SIGNATURE:
2_A	08/08/24	G.Randi

ROSETTI MARINO SpA

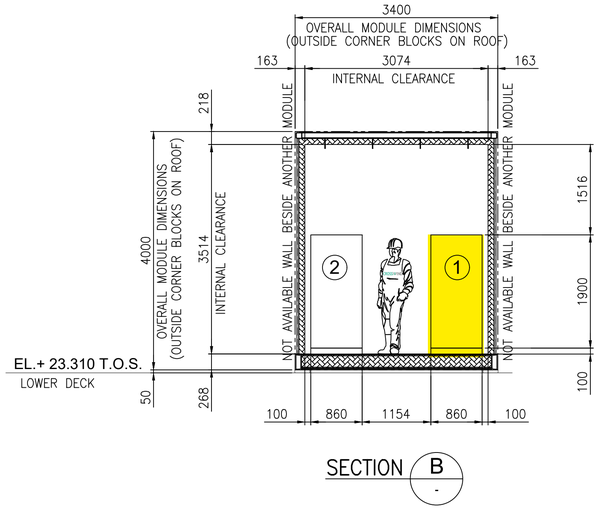
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	27/05/2024	FMO	LMA/AMA	LMA/MDO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/03/2024	GPA	LMA/AMA	LMA/MDO	ISSUE FOR REVIEW (IFR)
00	08/11/2023	DSF	CB/AMA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

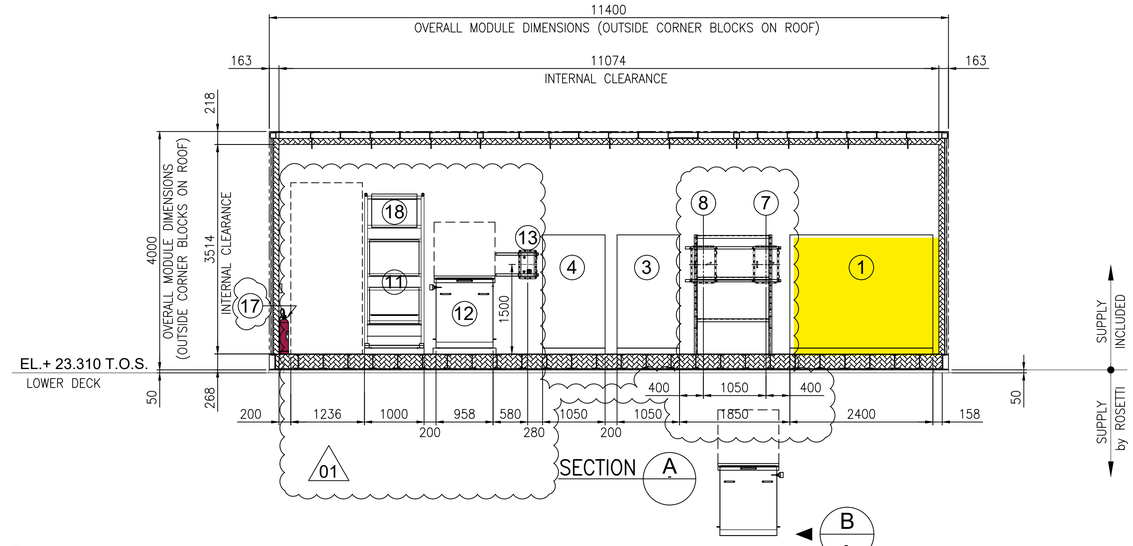
CROSSWIND | ROSETTI MARINO

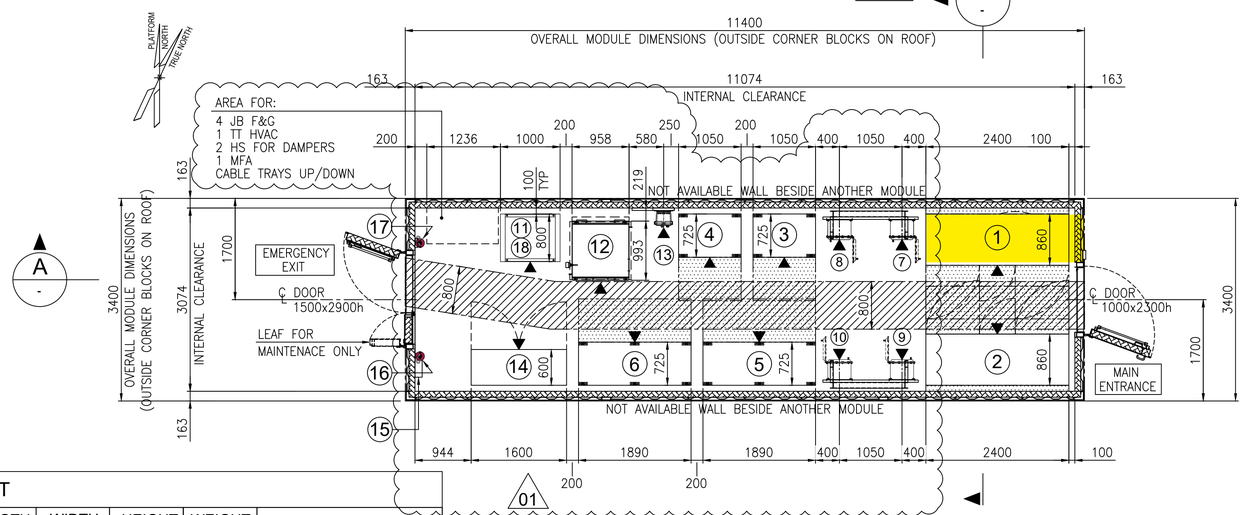
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

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







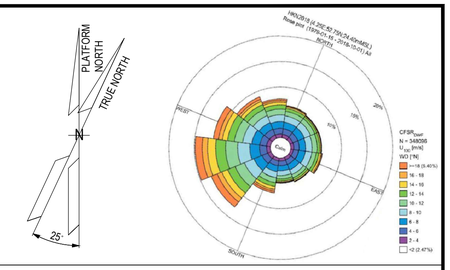
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

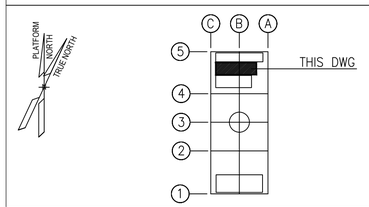
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

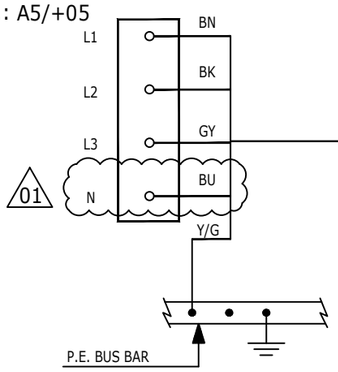
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File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

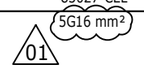
FROM	TO

DESCRIPTION: LV Switchgear
TAG NUMBER: SG-200N1

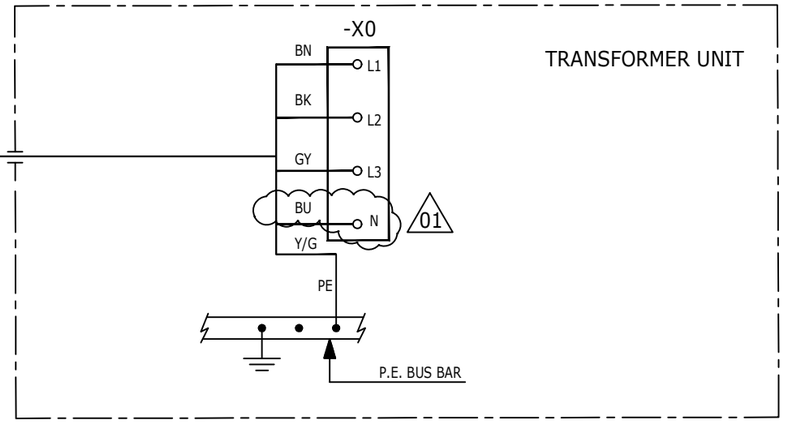
COLUMN/CUBIC.: A5/+05



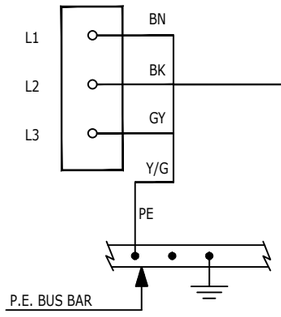
83027-CEL
5G16 mm²



DESCRIPTION: IMPRESSED CURRENT CATHODIC PROTECTION (ICCP) SYSTEM
TAG NUMBER: CN-200N1

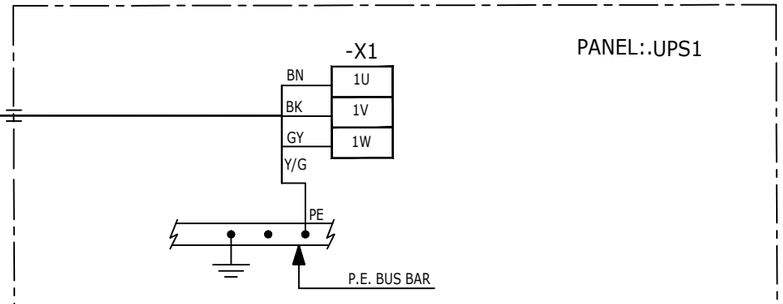


COLUMN/CUBIC.: A3/+01

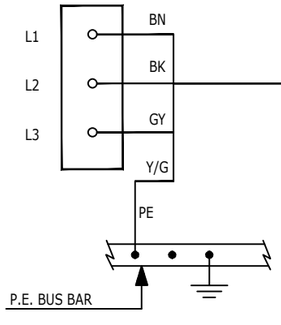


83028-CEL
4G35 mm²

DESCRIPTION: AC UPS PAS - 30MIN - LINE A
TAG NUMBER: UP-200F3

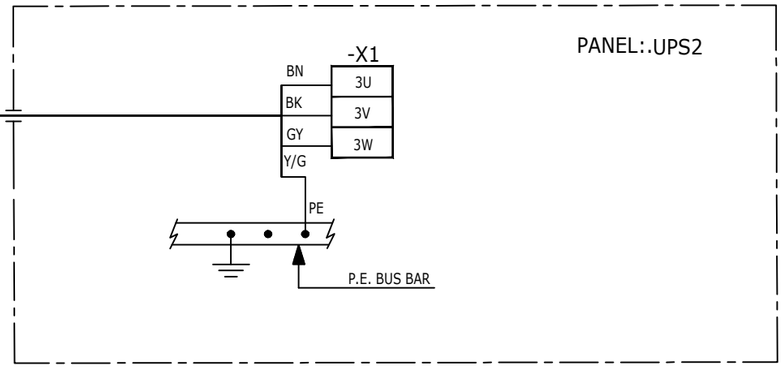


COLUMN/CUBIC.: A4/+01



83029-CEL
4G35 mm²

DESCRIPTION: AC UPS PAS - 30MIN - LINE B
TAG NUMBER: UP-200F3



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20149**

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
LV SWITCHGEAR SG-200N1

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

SCALE : 1:X

A3

DRAWING NO. 123A90-DDL-EL-DG-20149

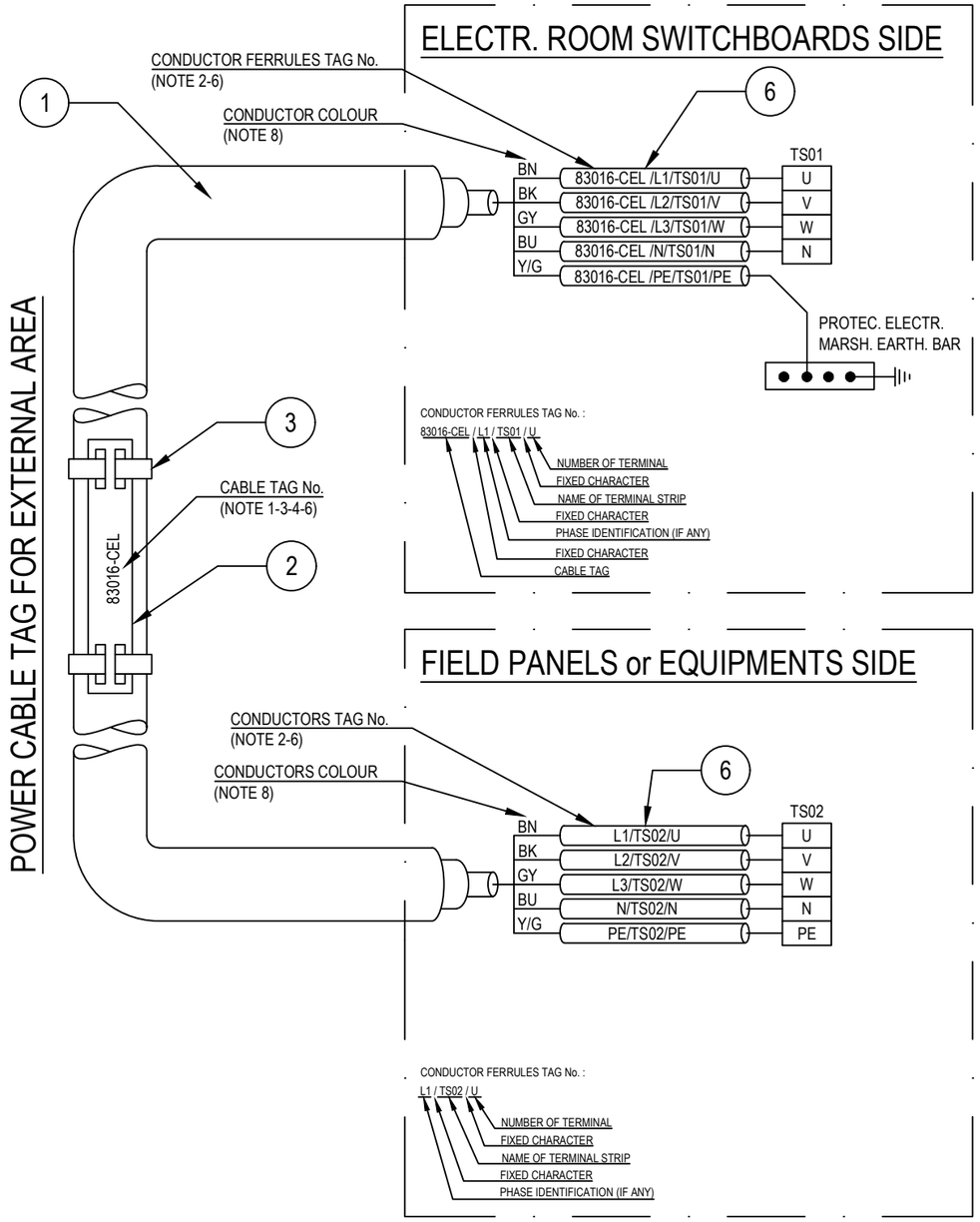
SHEET 027

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20162 Rev. 01

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.

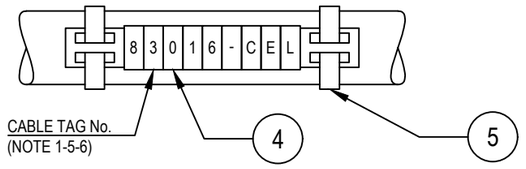
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

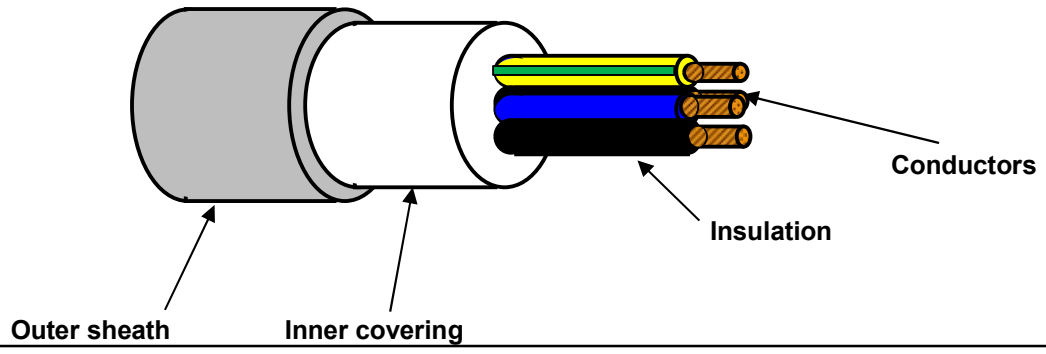
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Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
83029-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						SG-200N1	LV 0,4 kV MCC Switchgear	Lower Deck (B-200)	UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	ELECV09-4G35	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 4G35mm² - Grey	n.a.			T1_M40_Single				L-450-101-LVT-025 / L-600-101-LVT-017 / L-600-101-LVT-019 / L-600-101-LVT-020 / E-MCT-204 / L-600-101-LVT-010 / L-450-101-LVT-005 / E-MCT-302 / L-600-101-LVT-035 / L-600-101-LVT-038 / L-600-101-LVT-036 / L-450-101-LVT-040

FLEI s.r.l.

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

4G35 - L.V. POWER CABLE - Flame Retardant



TECHNICAL FEATURES

Conductors :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	EPR compound, quality to IEC 60092.360, Nominal Thickness 1,2 mm	
Cores colour code :	**Black - Brown - Grey - 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 1,5 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G35 SQMM - EPR/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 -**	
	Year of Manufacture - CE + Meter Marking	
Outer diameter :	(27,4 ± 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 :	≥ 480 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.

ITEM	Tag	83030-CEL	: LV Switchgear / AC UPS PAS - 30min - Bypass		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)		Module	LD_B-200/LD_B-300	
TASK	code	C10000555	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: 4G35 mm2 | Color: Grey

From: SG-200N1 | To: UP-200F3

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	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	83030-CEL	: LV Switchgear / AC UPS PAS - 30min - Bypass			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-200/LD_B-300
TASK	code	C10000555	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form CPX09	LV Power Cable

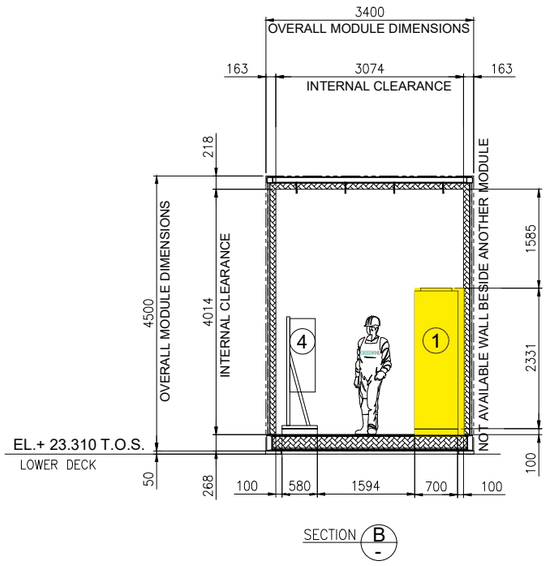
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.2	
6		PH 2	0.2	
7		PH 3	0.2	
8	ARMOUR CONTINUITY Ω		NA	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0.2	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>600	
11		PH2 / PH1-PH3-A-E	>600	
12		PH3 / PH1-PH2-A-E	>600	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

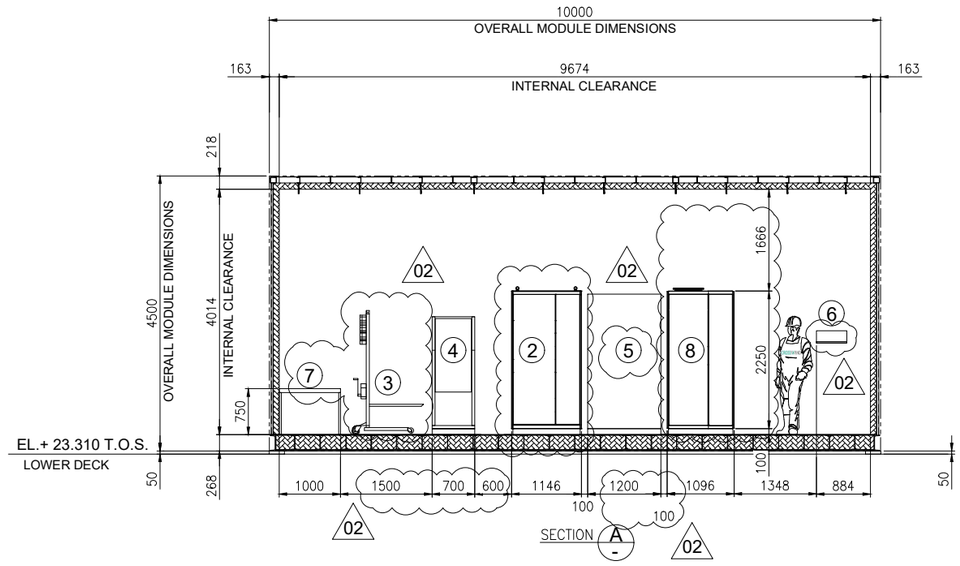
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

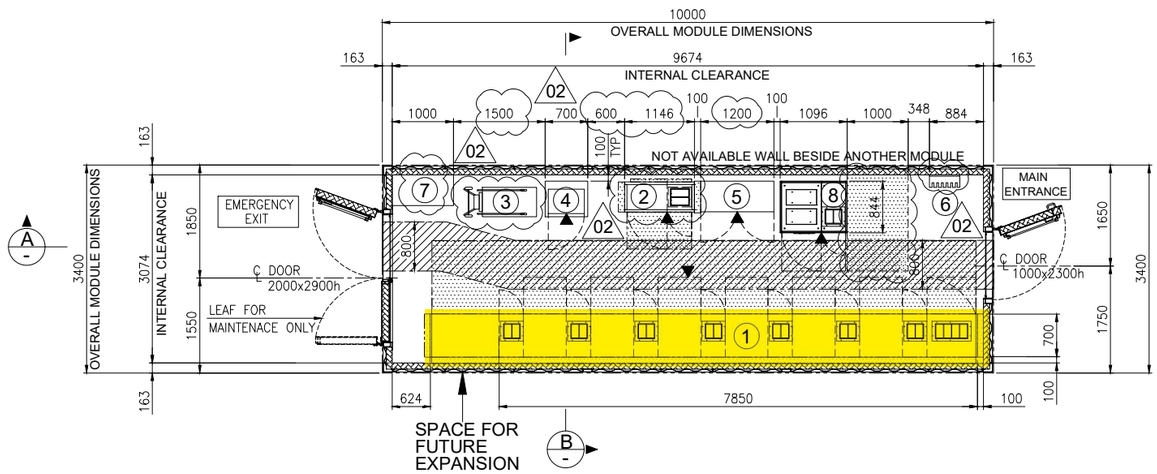
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-21	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-21T17:23:43.703Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:36:05.830Z	

DRAWING NO. 123A90-DDL-EL-DL-20105 | REV. 02





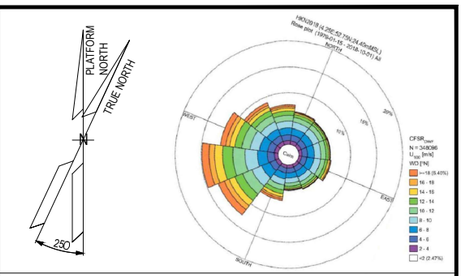


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

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

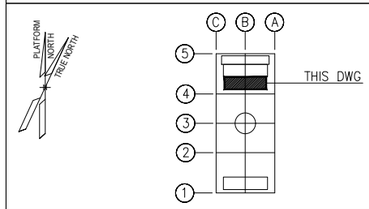
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

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.:	DATE:	SIGNATURE:
2_A	08/08/24	G.Randi

ROSETTI MARINO SpA

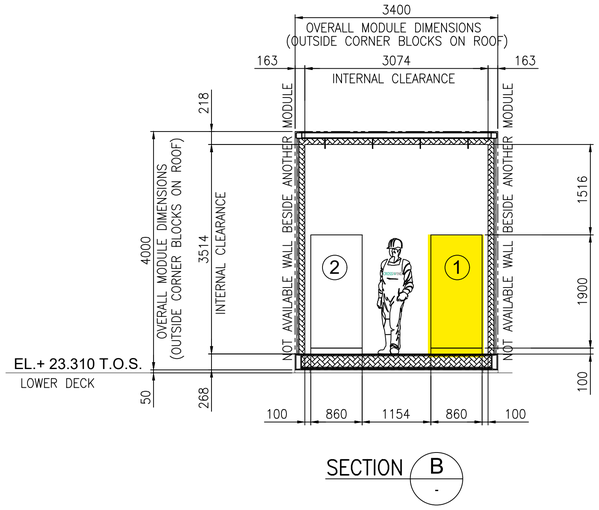
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	27/05/2024	FMO	LMA/AMA	LMA/MDO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/03/2024	GPA	LMA/AMA	LMA/MDO	ISSUE FOR REVIEW (IFR)
00	08/11/2023	DSF	CB/AMA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

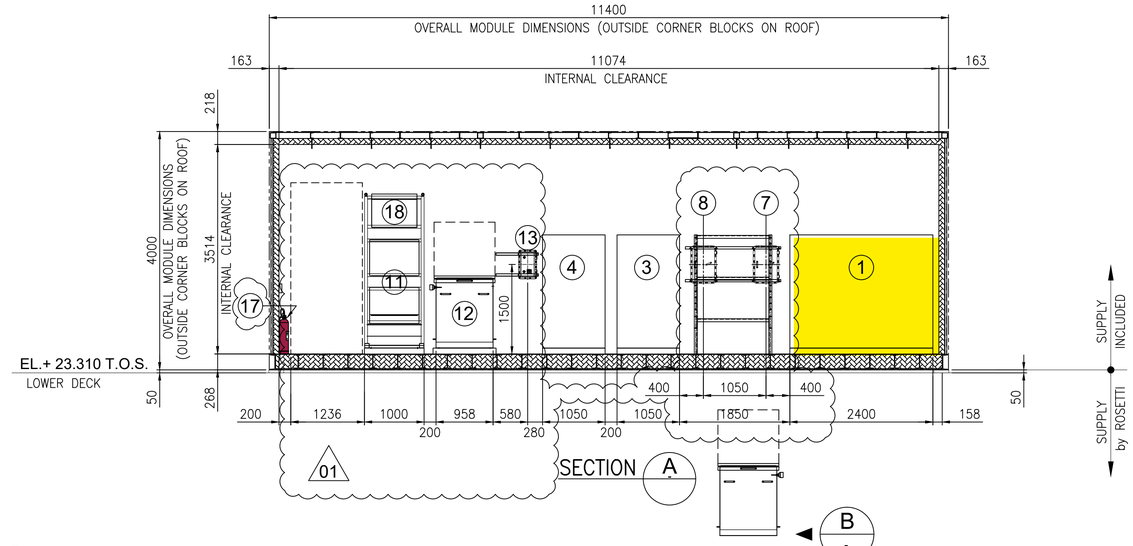
CROSSWIND | ROSETTI MARINO

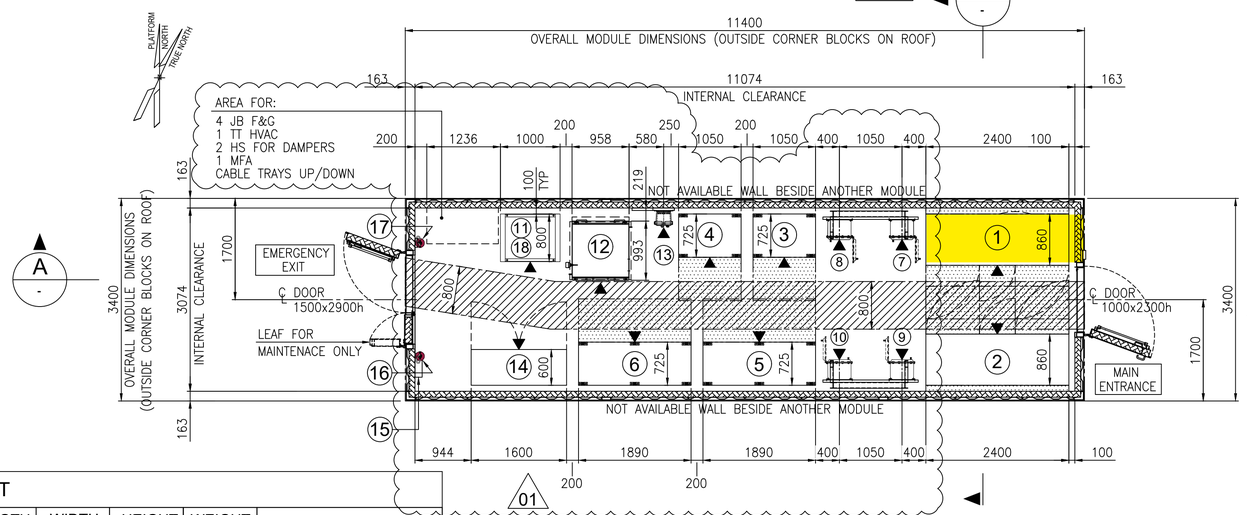
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

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







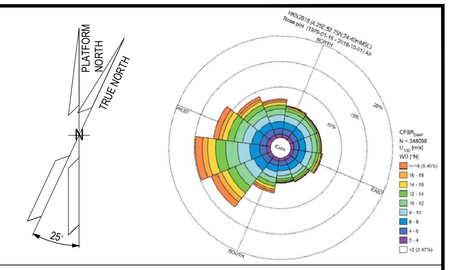
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

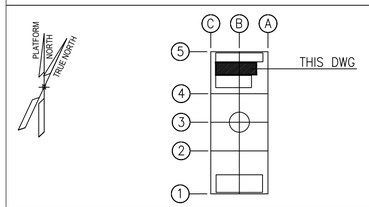
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

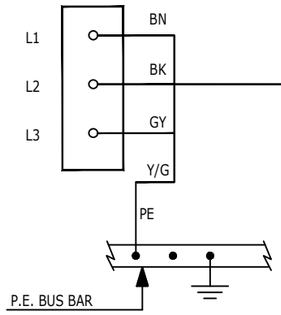
DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

FROM	TO

DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

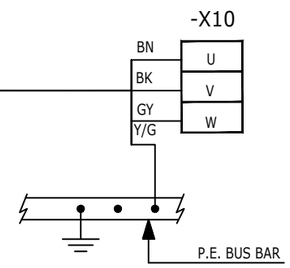
COLUMN/CUBIC.: A7/+02



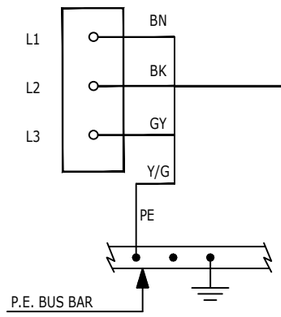
83030-CEL
4G35 mm²

DESCRIPTION: AC UPS PAS - 30MIN - BYPASS
TAG NUMBER: UP-200F3

PANEL:.BYPASS



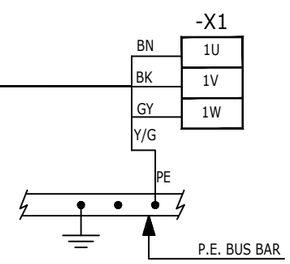
COLUMN/CUBIC.: A6/+05



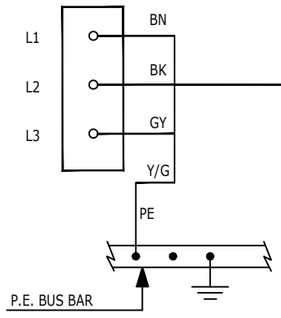
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4G35 mm²

DESCRIPTION: AC UPS F&G - 8H - LINE A
TAG NUMBER: UP-200F4

PANEL:.UPS1

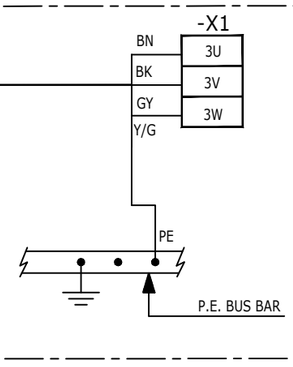


COLUMN/CUBIC.: A6/+06



83032-CEL
4G35 mm²

DESCRIPTION: AC UPS F&G - 8H - LINE B
TAG NUMBER: UP-200F4



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
LV SWITCHGEAR SG-200N1

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

SCALE : 1:X

A3

DRAWING NO. 123A90-DDL-EL-DG-20149

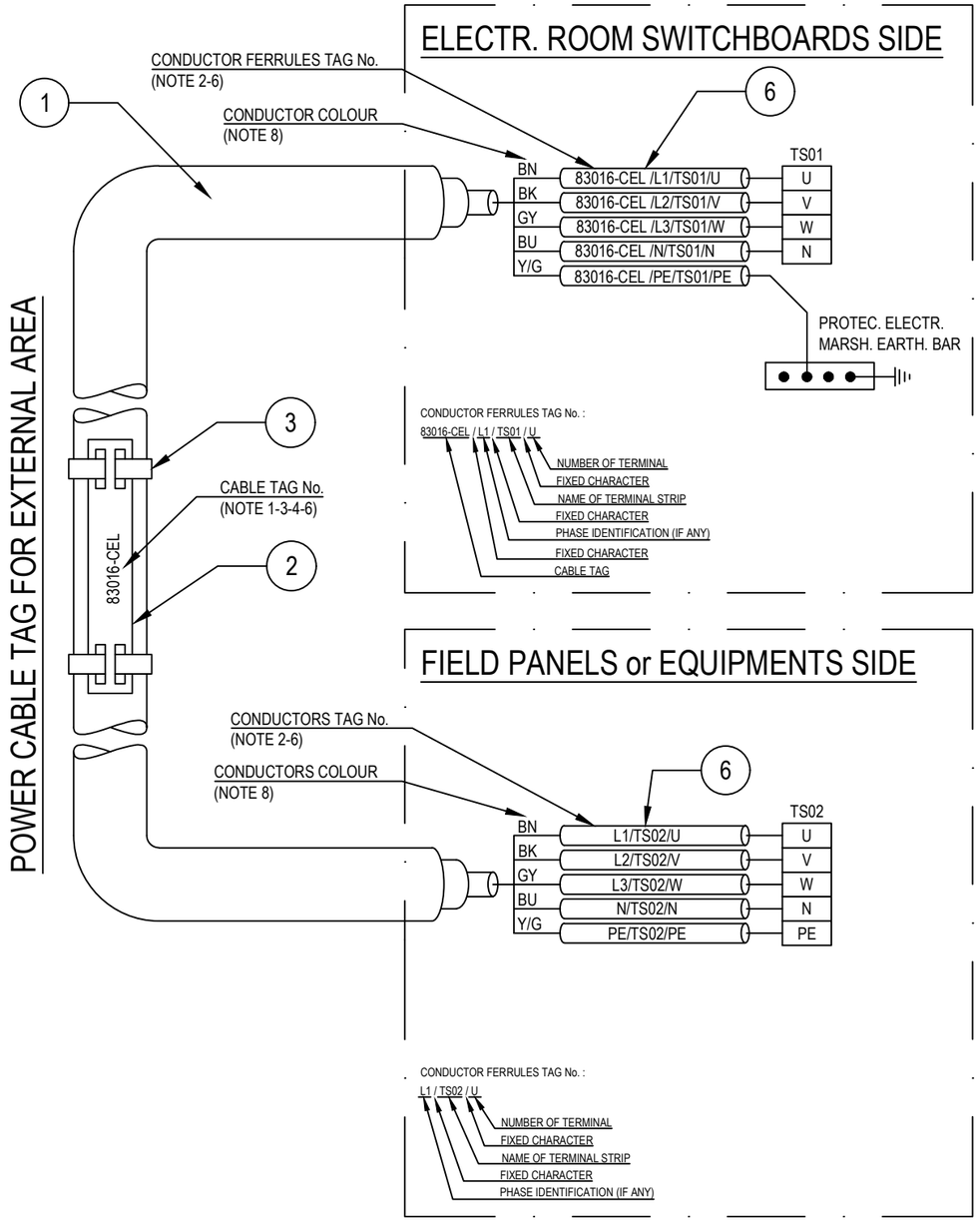
SHEET 028

REV. 01

File Name : 123A90-DDL-EL-DG-20162 Rev. 01

F.to UNI A3: 420mmx297mm

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.

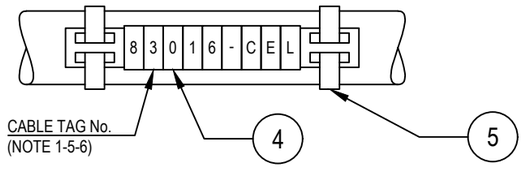
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

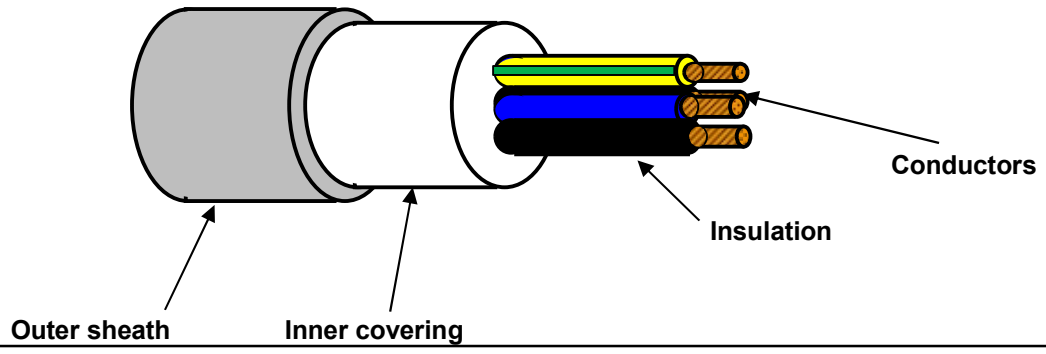
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
83030-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						SG-200N1	LV 0,4 kV MCC Switchgear	Lower Deck (B-200)	UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	ELECV09-4G35	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 4G35mm² - Grey	n.a.			T1_M40_Single				L-450-101-LVT-024 / L-600-101-LVT-017 / L-600-101-LVT-019 / L-600-101-LVT-020 / E-MCT-204 / L-600-101-LVT-010 / L-450-101-LVT-005 / E-MCT-302 / L-600-101-LVT-035 / L-600-101-LVT-038 / L-600-101-LVT-036 / L-450-101-LVT-040

FLEI s.r.l.

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

4G35 - L.V. POWER CABLE - Flame Retardant



TECHNICAL FEATURES

Conductors :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	EPR compound, quality to IEC 60092.360, Nominal Thickness 1,2 mm	
Cores colour code :	**Black - Brown - Grey - 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 1,5 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 4G35 SQMM - EPR/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 -**	
	Year of Manufacture - CE + Meter Marking	
Outer diameter :	(27,4 ± 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 :	≥ 480 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.

ITEM	Tag	83122-CEL	: Lighting & Small Power DB BoP / AC UPS PAS AUXILIARY			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300/LD_B-200
TASK	code	C10000641	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: 3G2.5 | Color: Grey

From: DP-200N1 | To: UP-200F3

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.	OK
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"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	83122-CEL	: Lighting & Small Power DB BoP / AC UPS PAS AUXILIARY			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300/LD_B-200
TASK	code	C10000641		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	1,0	
6		PH 2	1,0	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		NA	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,9	
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	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

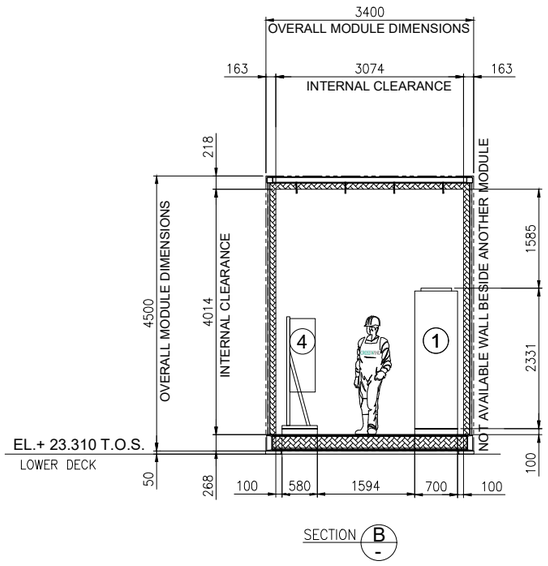
TESTING INSTRUMENTS USED

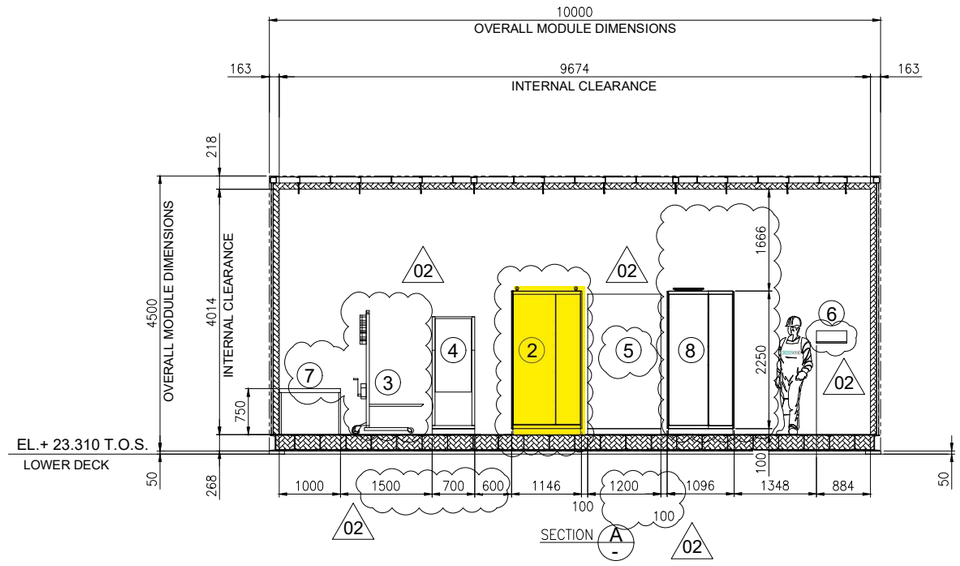
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

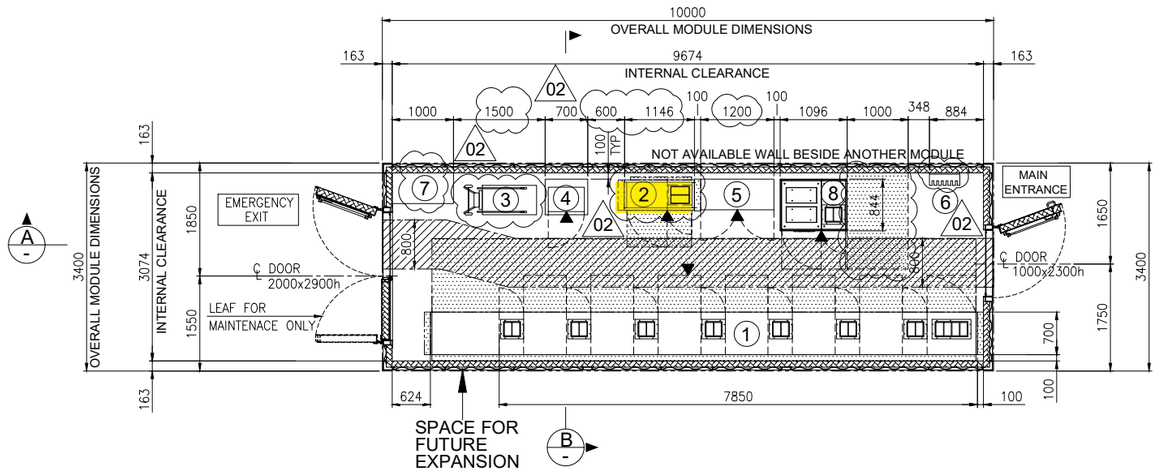
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-21	2024-10-24	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-21T17:25:18.610Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-24T16:09:43.184Z	

DRAWING NO. 123A90-DDL-EL-DL-20105 | REV. 02





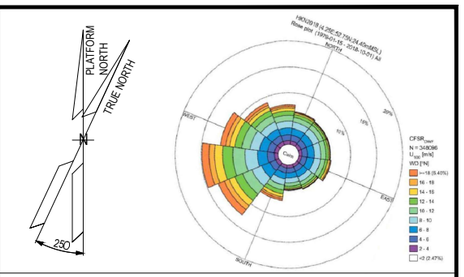


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

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

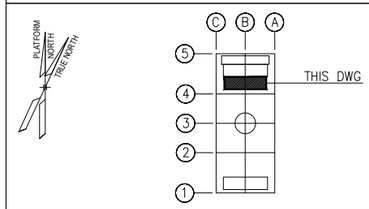
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

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.:	DATE:	SIGNATURE:
2_A	08/08/24	G.Randi

ROSETTI MARINO SpA

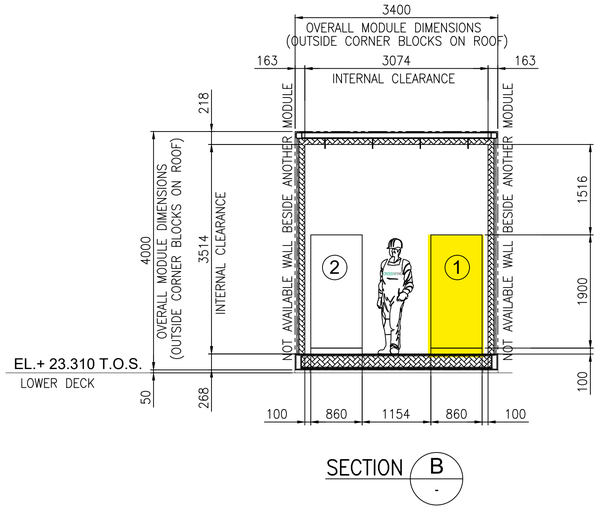
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	27/05/2024	FMO	LMA/AMA	LMA/MDO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/03/2024	GPA	LMA/AMA	LMA/MDO	ISSUE FOR REVIEW (IFR)
00	08/11/2023	DSF	CB/AMA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

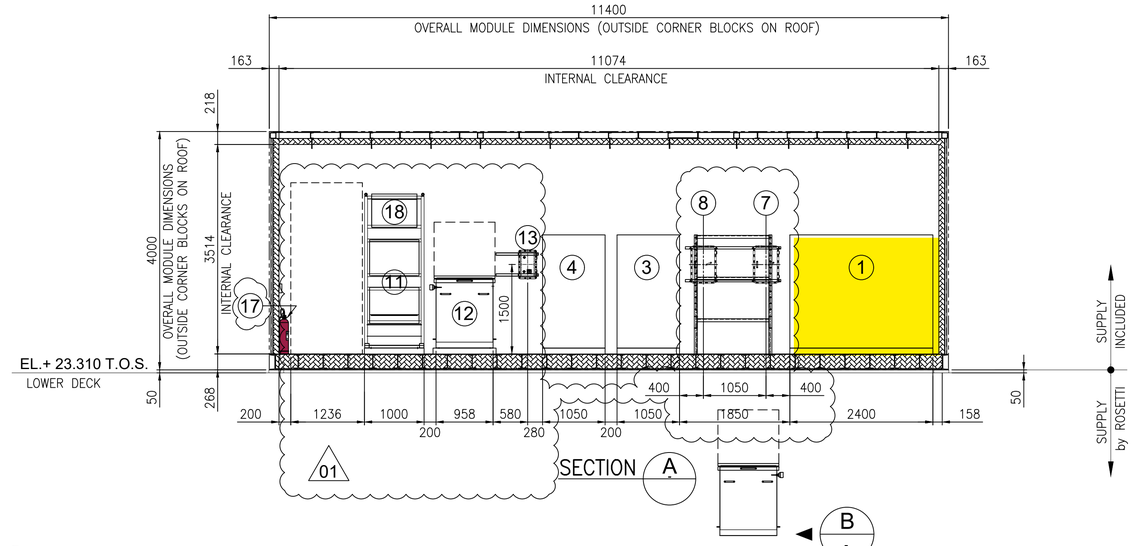
CROSSWIND | ROSETTI MARINO

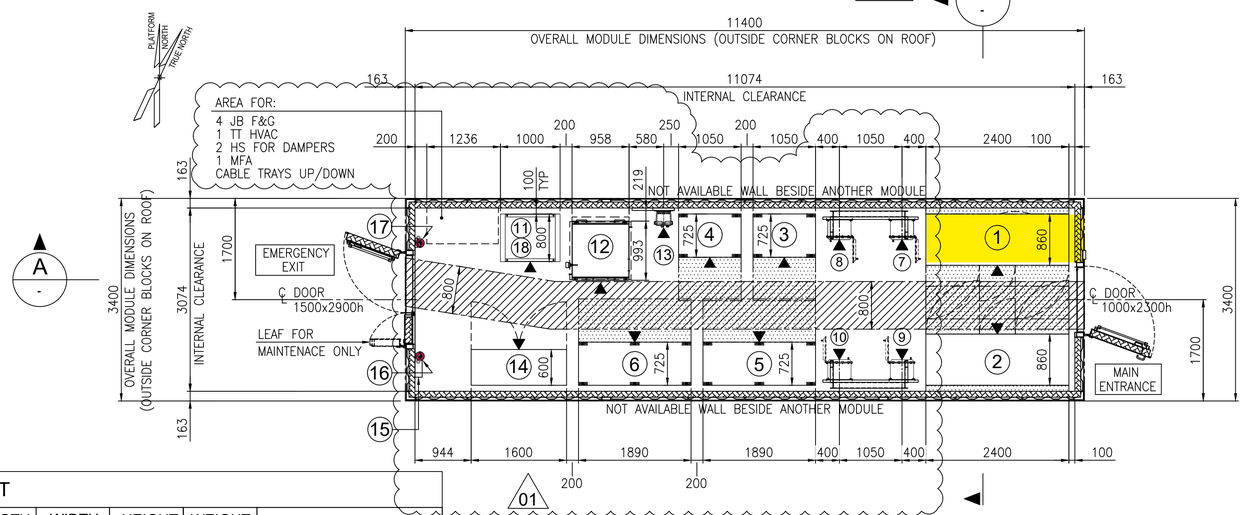
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

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







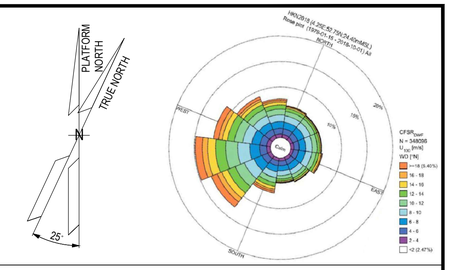
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

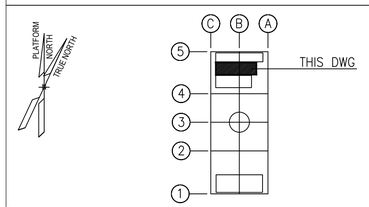
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

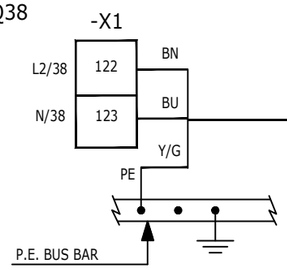
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File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

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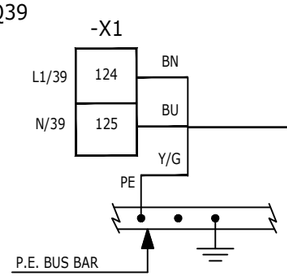
DESCRIPTION: LIGHTING & SMALL POWER DB BOP
TAG NUMBER: DP-200N1

CUBICLE/CB: +03/Q38



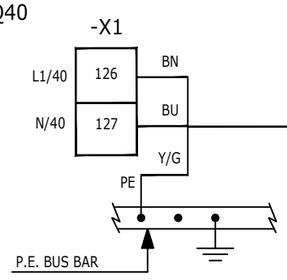
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CUBICLE/CB: +03/Q39



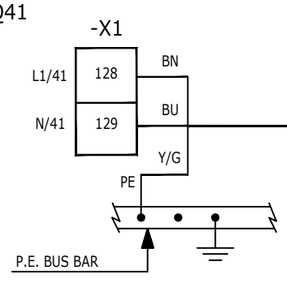
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CUBICLE/CB: +03/Q40



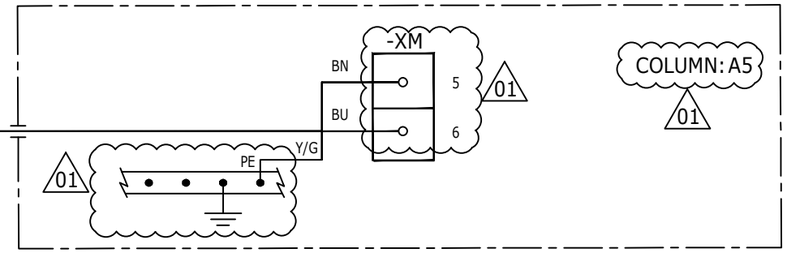
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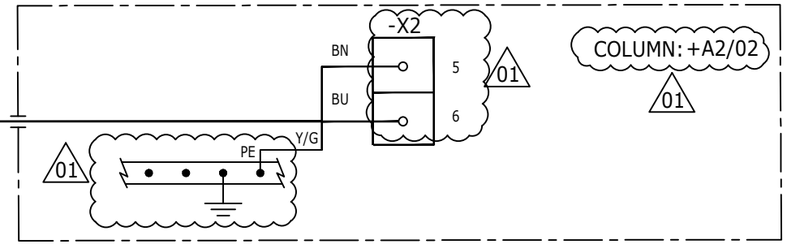


83122-CEL
3G2.5 mm²

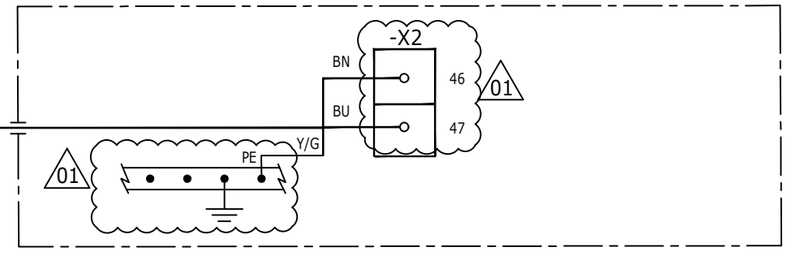
DESCRIPTION: AUXILIARY 6.6KV SWITCHBOARD
TAG NUMBER: SG-100D1



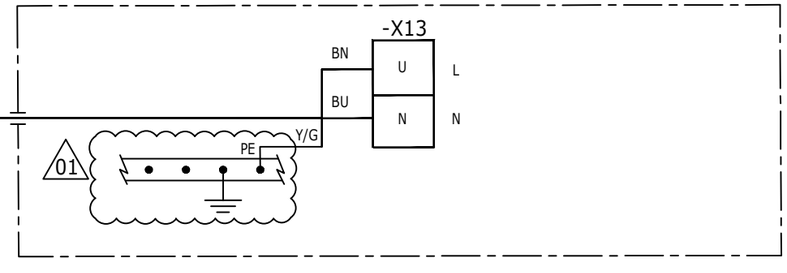
DESCRIPTION: AUXILIARY LV
TAG NUMBER: SG-200N1



DESCRIPTION: LV SWBD 800/460V AUXILIARY
TAG NUMBER: SG-200D2



DESCRIPTION: AC UPS PAS AUXILIARY
TAG NUMBER: UP-200F3



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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)

CROSSWIND

ROSETTI MARINO

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

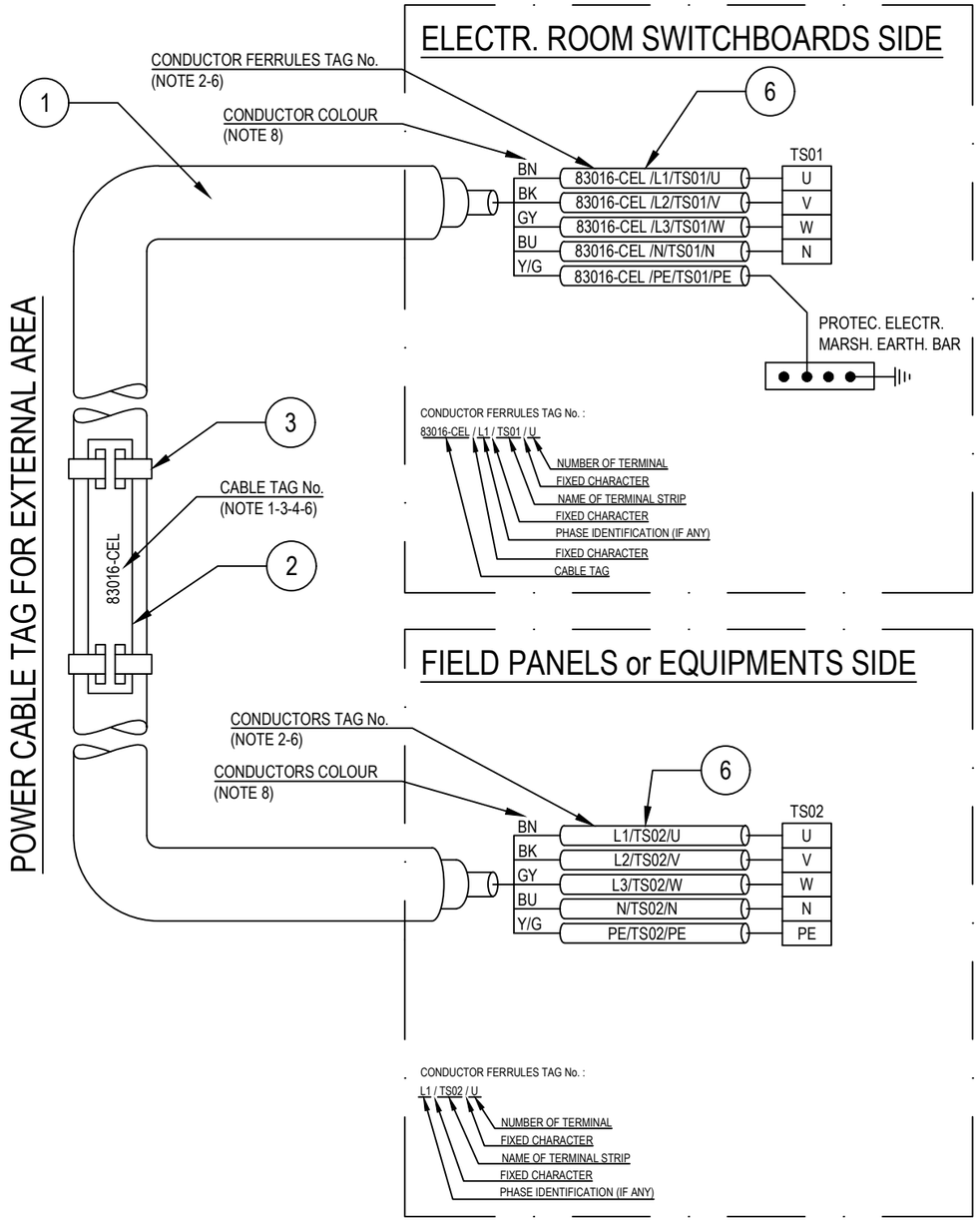
SHEET 056

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20162 Rev. 01

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.

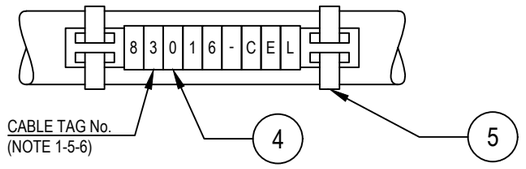
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

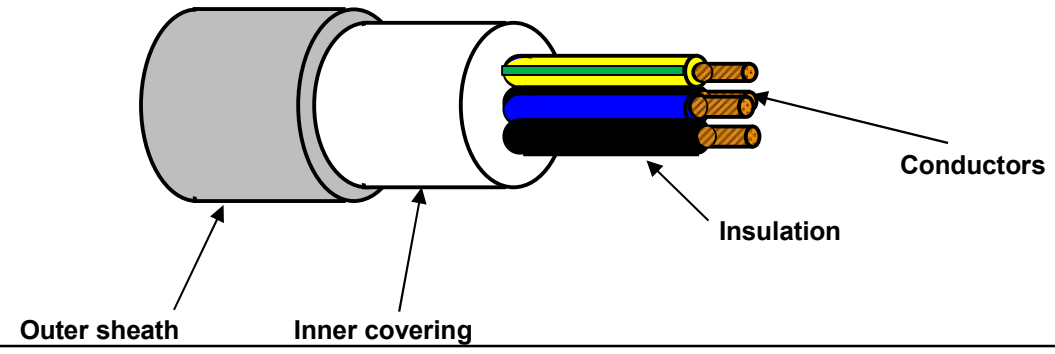
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
83122-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						DP-200N1	LV 0,4 / 0,23 kV Distribution Switchgear	Lower Deck (B-200)	UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	ELECV06-3G2,5	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 3G2,5mm² - Grey	n.a.			T1_M20_Single				L-450-101-LVT-030 / L-600-101-LVT-020 / E-MCT-204 / L-600-101-LVT-010 / L-450-101-LVT-005 / E-MCT-302 / L-600-101-LVT-035 / L-600-101-LVT-038 / L-600-101-LVT-036 / L-450-101-LVT-040

FLEI s.r.l.

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

3G2,5 - 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 :	**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 - 3G2,5 SQMM - EPR/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 -**	
	Year of Manufacture - CE + Meter Marking	
Outer diameter :	(13,0 ± 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.

ITEM	Tag	84331-CEL-1-P	: AC UPS PAS - Charger-A / AC UPS PAS - Battery Isolator-A		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)		Module	LD_B-300	
TASK	code	C10000642	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 1X70 mm2 | Color Orange

From BC-200F3A | To CB-200F3A

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.	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).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
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	84331-CEL-1-P	: AC UPS PAS - Charger-A / AC UPS PAS - Battery Isolator-A			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	
TASK	code	C10000642		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

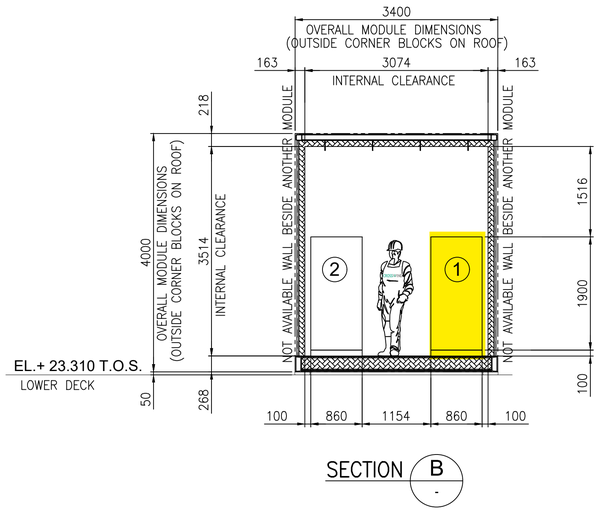
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.4	
6		PH 2	NA	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.4	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		NA	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	NA	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

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

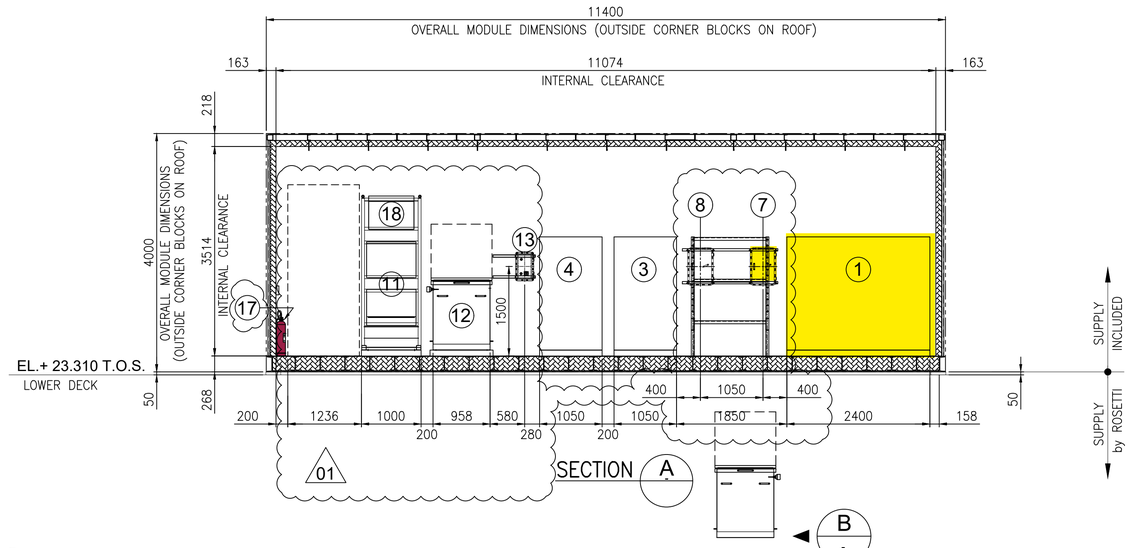
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:56:36.255Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:38:49.425Z	

DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01



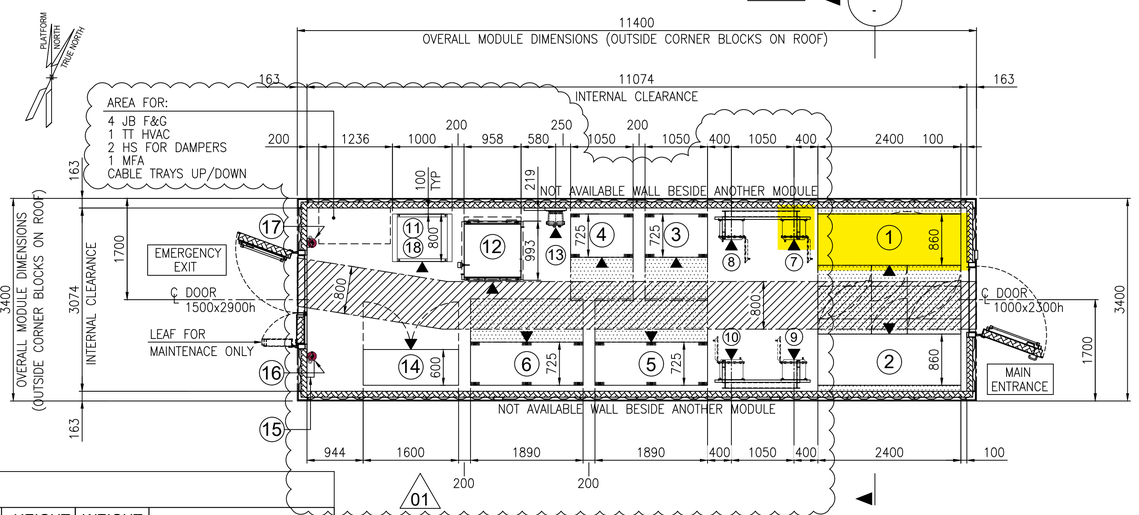
SECTION B -



SECTION A -

SUPPLY INCLUDED

SUPPLY by ROSETTI



EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

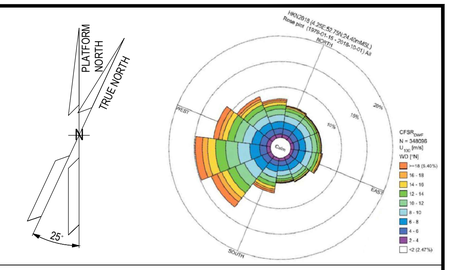
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

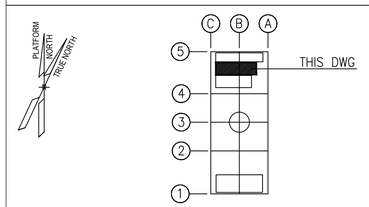
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

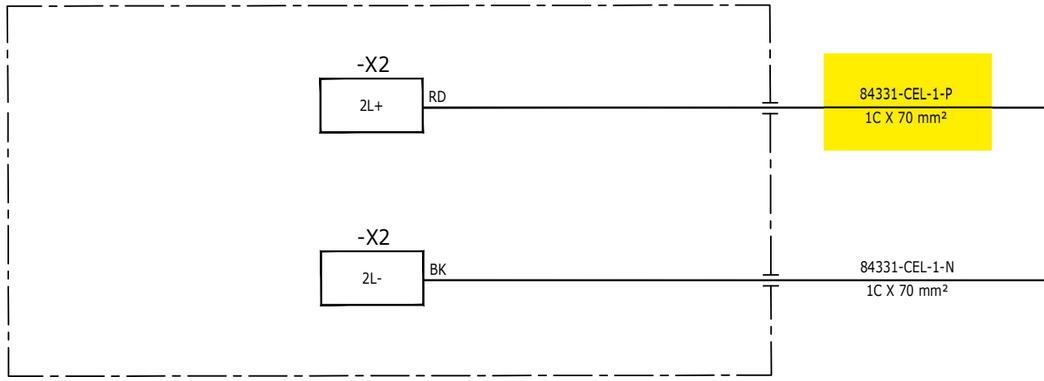
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

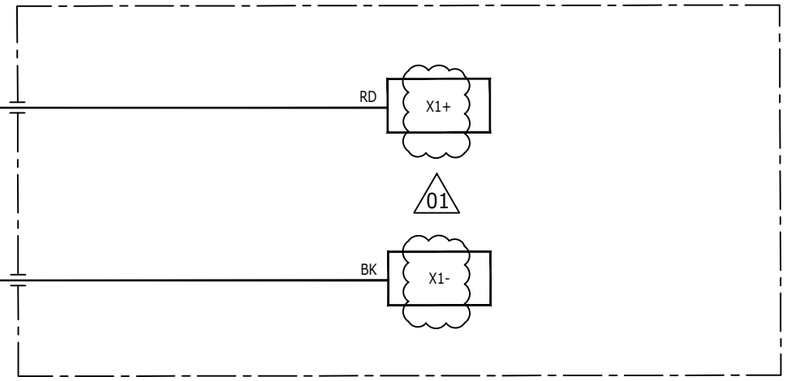
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FROM	TO

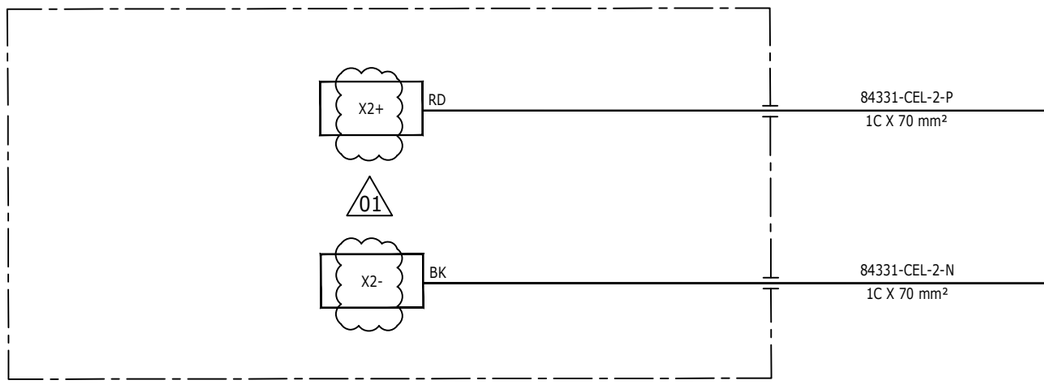
DESCRIPTION: AC UPS PAS - CHARGER-A
TAG NUMBER: BC-200F3A



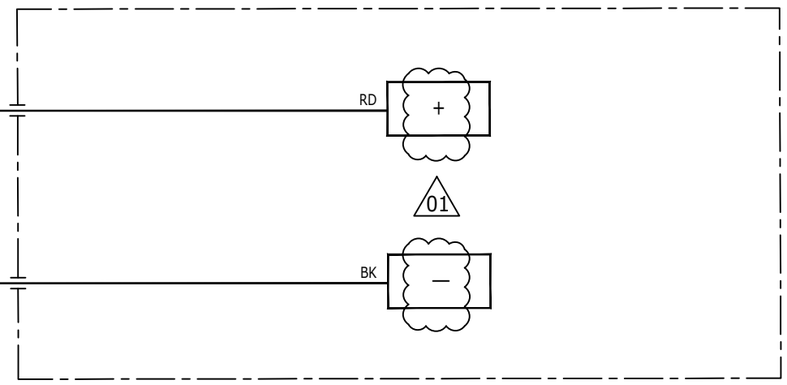
DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A



DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A



DESCRIPTION: AC UPS PAS - BATTERY-A
TAG NUMBER: BA-200F3A



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
AC UPS PAS – CHARGER–A & BATTERY ISOLATOR–A

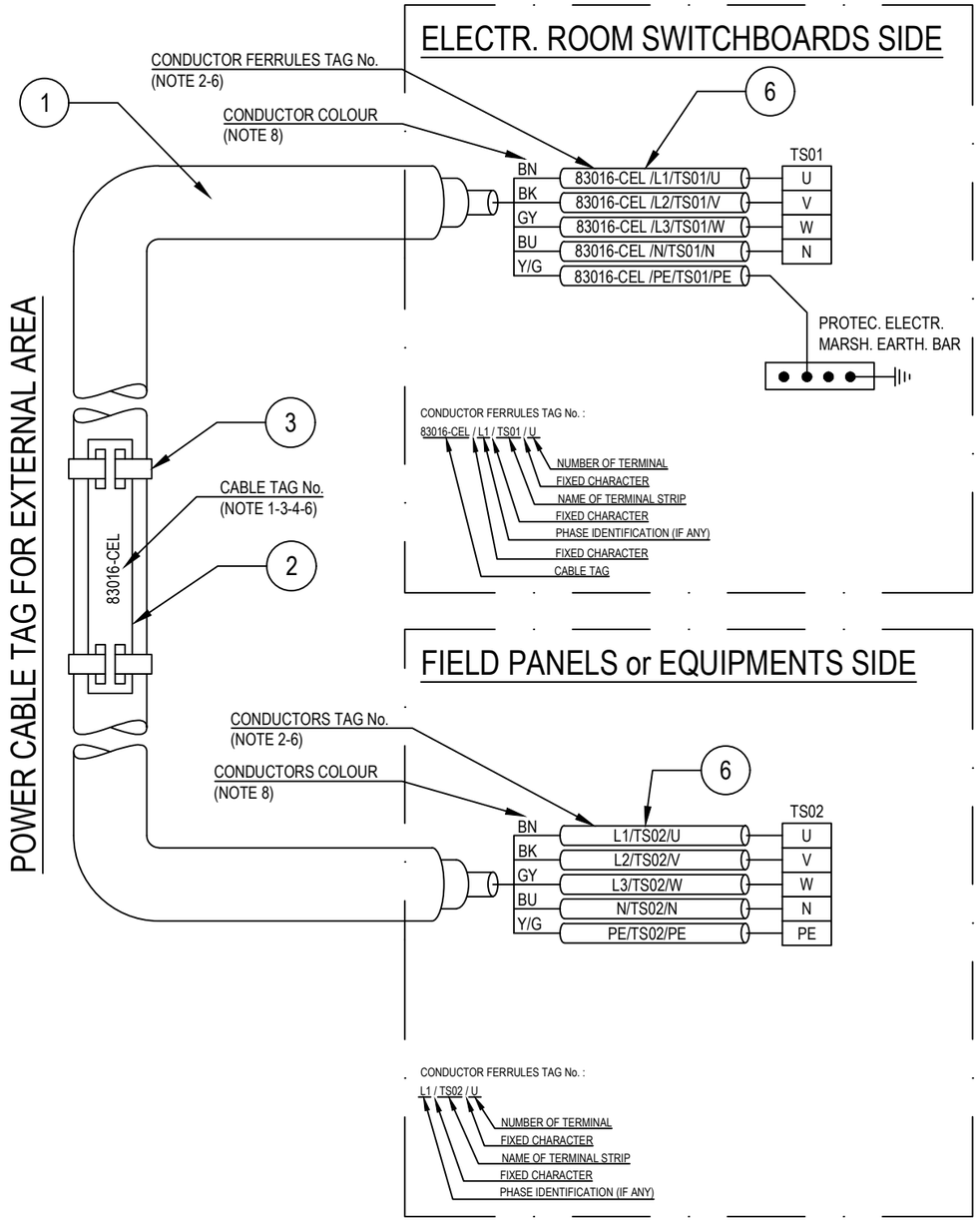
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90–DDL–EL–DG–20149 | SHEET 061 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20162 Rev. 01

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.

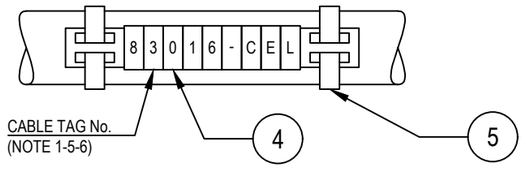
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6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

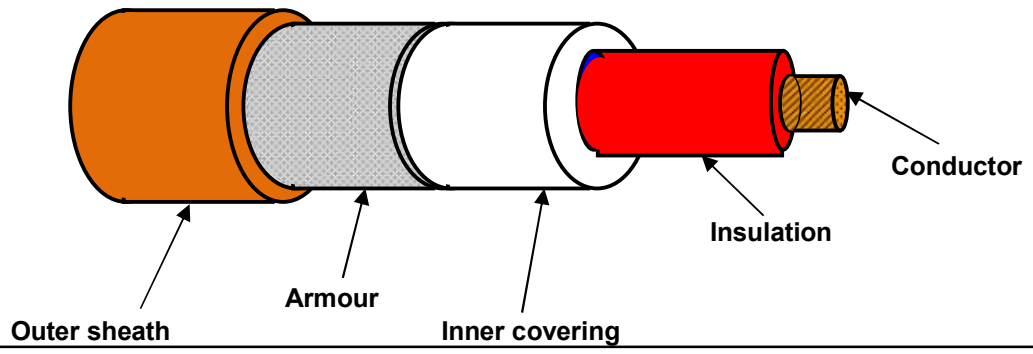
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84331-CEL-1-P	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						BC-200F3A	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	ELECV24-1X70	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 1Cx70mm² - Orange (Ins. Red) - DC	T2_M25S_Double			T2_M25S_Double				L-450-101-LVT-040 / L-600-101-LVT-036 / L-300-101-LVT-049 / L-300-101-LVT-056

FLEI s.r.l.

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

1CX70 - DC POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductor :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape/s (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Core colour code :	Red	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Not Required	
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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 1CX70 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 :	(15,3 ± 10%) mm	
Over Armour diameter :	(16,5 ± 10%) mm	
Outer diameter :	(19,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Core - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 380 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	84331-CEL-1-N	: AC UPS PAS - Charger-A / AC UPS PAS - Battery Isolator-A			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000643		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	1X70 mm2	Color	Orange
From	BC-200F3A	To	CB-200F3A		

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.	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).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
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	84331-CEL-1-N	: AC UPS PAS - Charger-A / AC UPS PAS - Battery Isolator-A			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000643		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

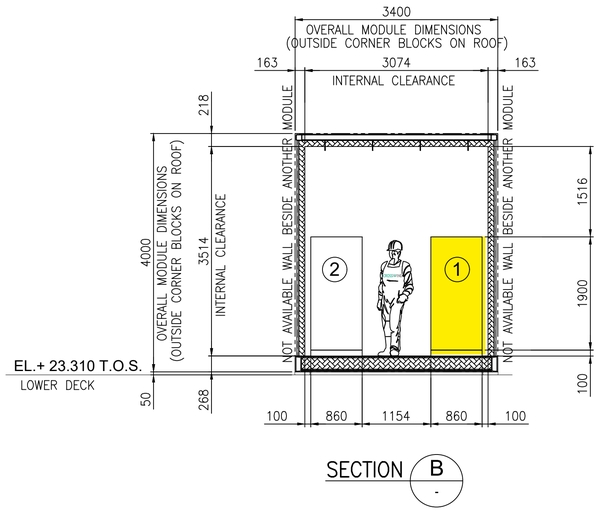
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.5	
6		PH 2	NA	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.5	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		NA	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	NA	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

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

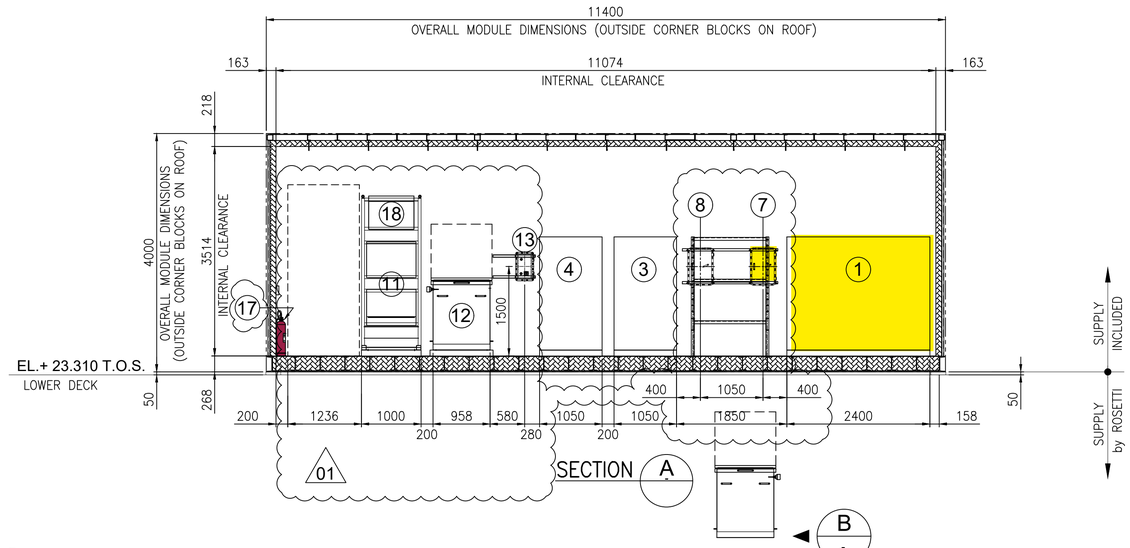
Comments:

	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:56:46.307Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:39:45.941Z	

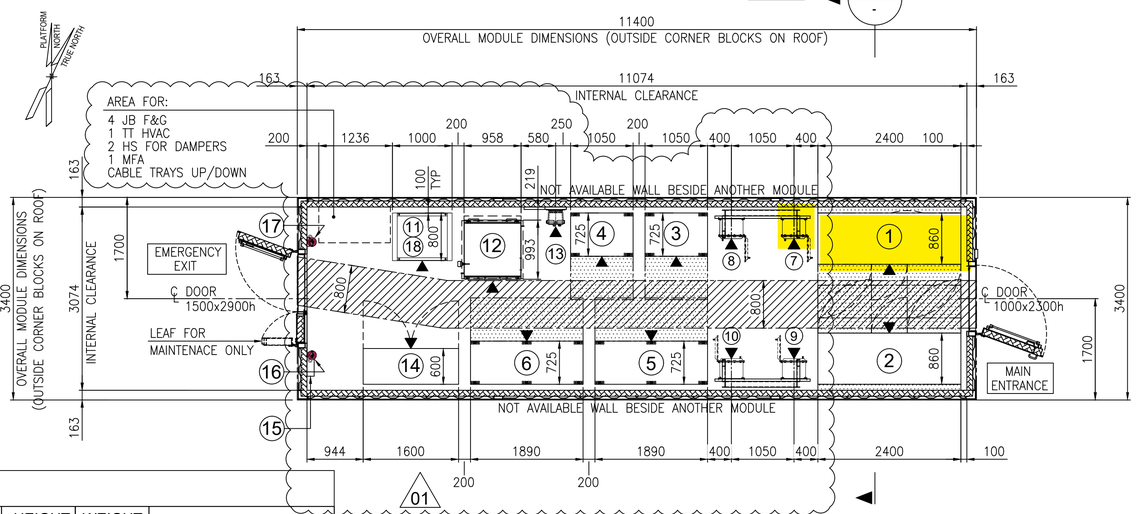
DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01



SECTION B



SECTION A



EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

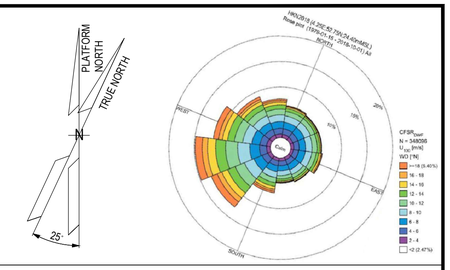
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

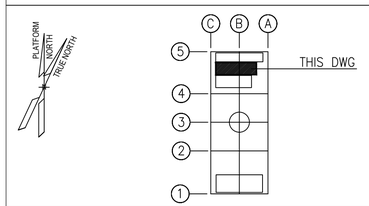
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

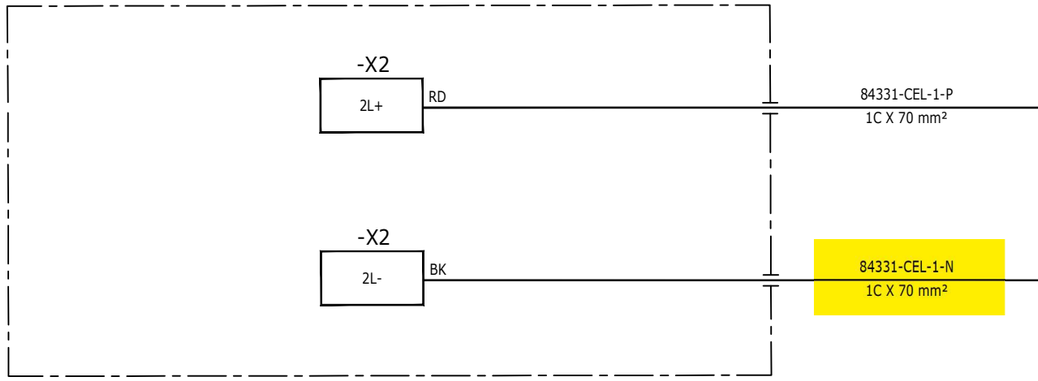
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

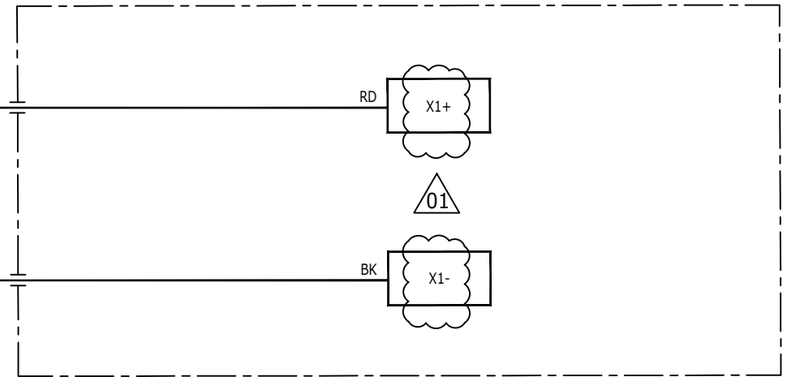
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FROM	TO

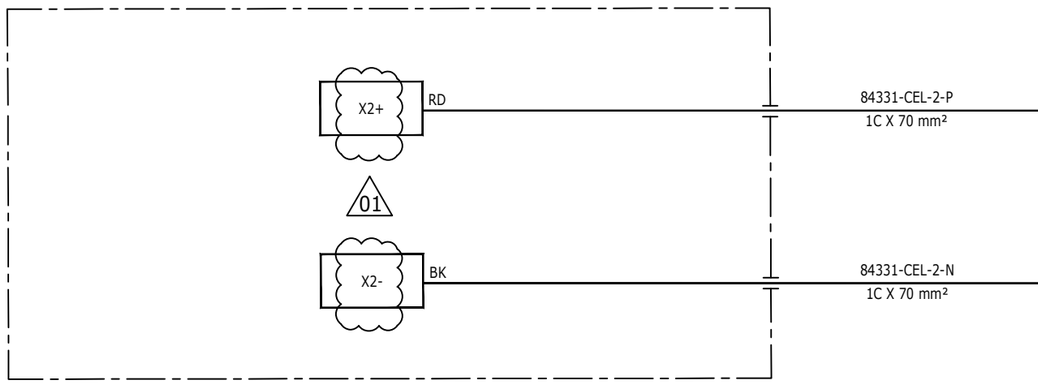
DESCRIPTION: AC UPS PAS - CHARGER-A
TAG NUMBER: BC-200F3A



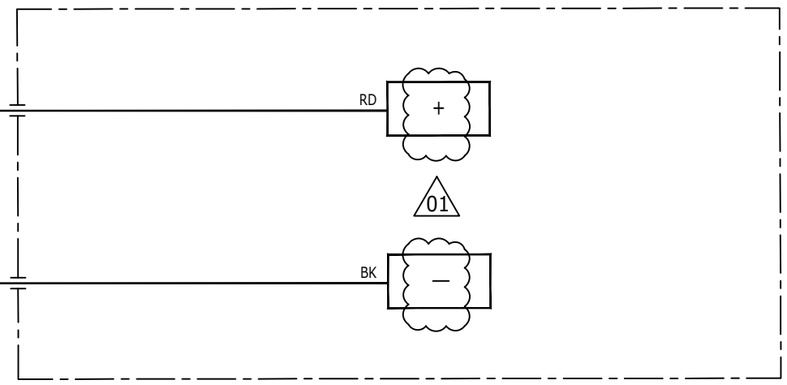
DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A



DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A



DESCRIPTION: AC UPS PAS - BATTERY-A
TAG NUMBER: BA-200F3A



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
AC UPS PAS – CHARGER–A & BATTERY ISOLATOR–A

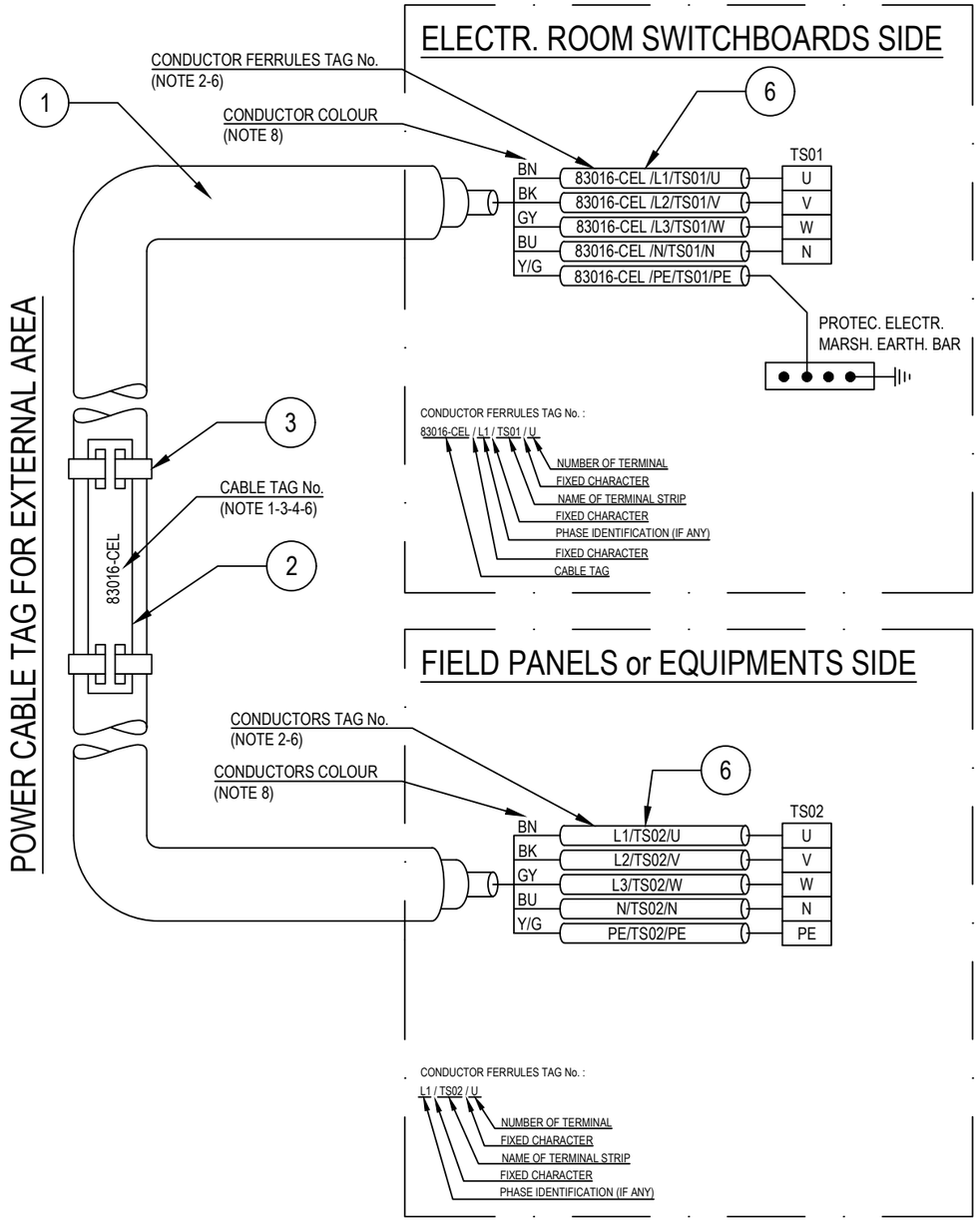
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90–DDL–EL–DG–20149 | SHEET 061 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20162 Rev. 01

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.

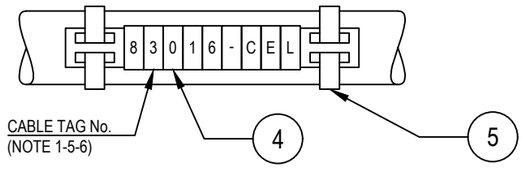
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

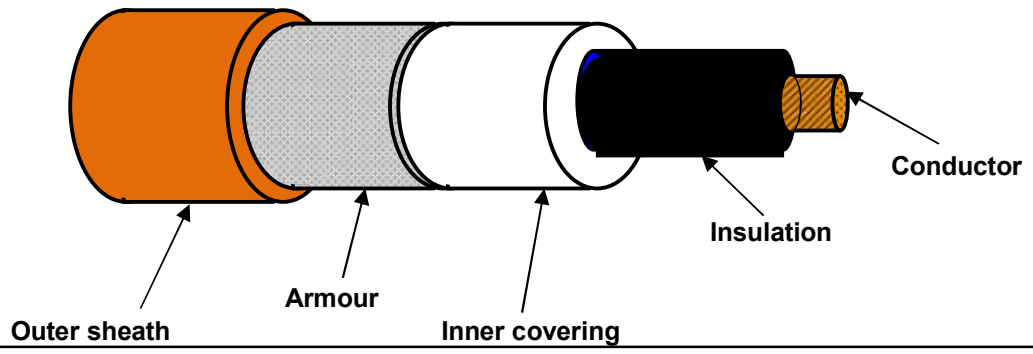
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84331-CEL-1-N	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						BC-200F3A	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	ELECV25-1X70	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 1Cx70mm² - Orange (Ins. Black) - DC	M25S	T2_M25S_Double			T2_M25S_Double				L-450-101-LVT-040 / L-600-101-LVT-036 / L-300-101-LVT-049 / L-300-101-LVT-056

FLEI s.r.l.

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

1CX70 - DC POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductor :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape/s (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Core colour code :	**Black**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Not Required	
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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 1CX70 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 :	(15,3 ± 10%) mm	
Over Armour diameter :	(16,5 ± 10%) mm	
Outer diameter :	(19,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Core - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 380 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	84331-CEL-2-P	: AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000644		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 1X70 mm2 Color Orange

From CB-200F3A To BA-200F3A

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.	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).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
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	84331-CEL-2-P	: AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000644		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

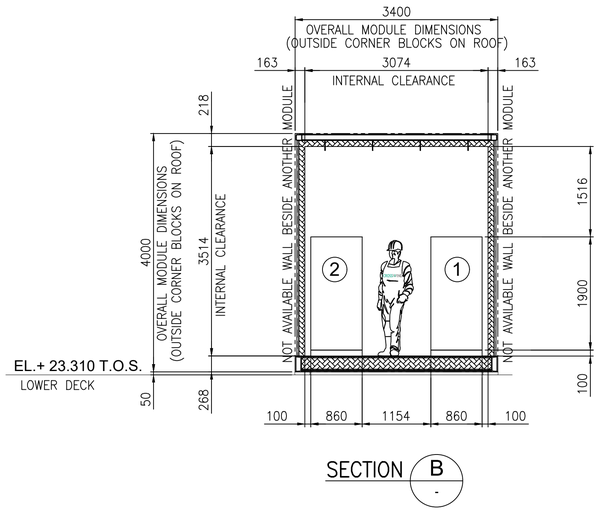
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.6	
6		PH 2	NA	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.6	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		NA	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	NA	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

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

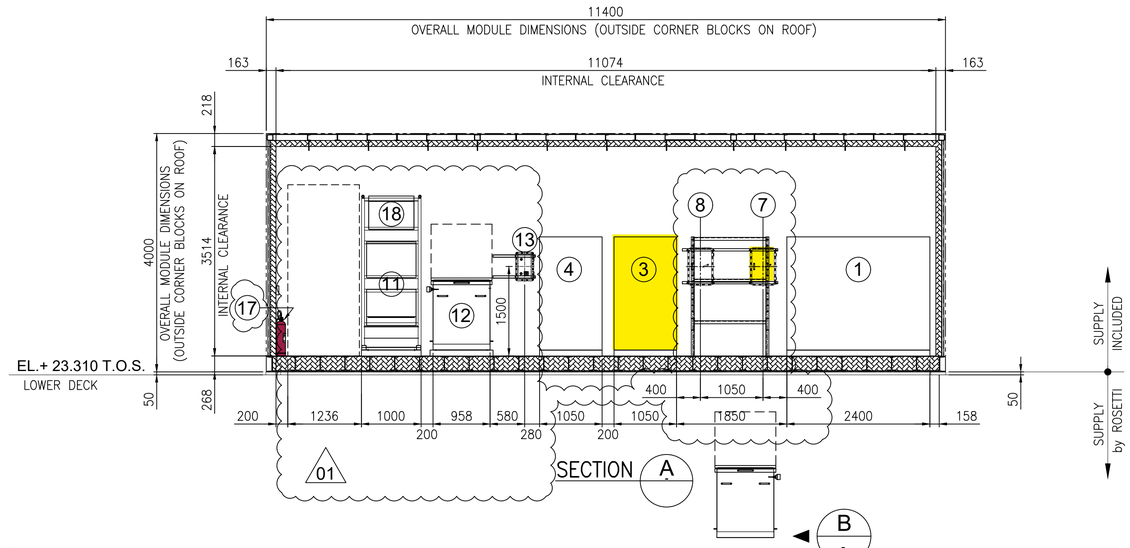
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-29T15:58:58.435Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:40:21.830Z	

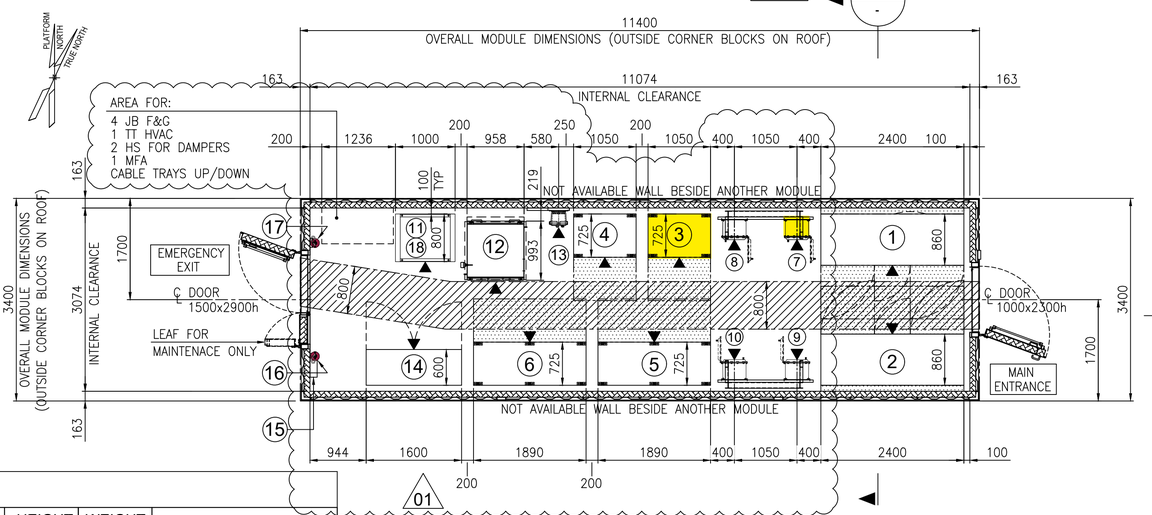
DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01



SECTION B



SECTION A



A

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

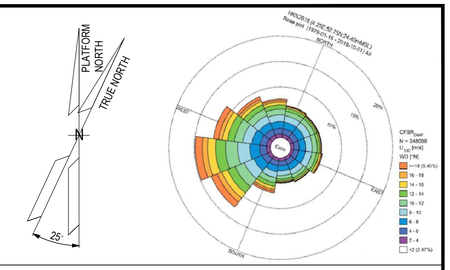
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

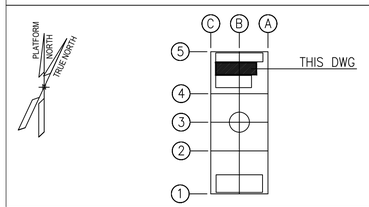
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

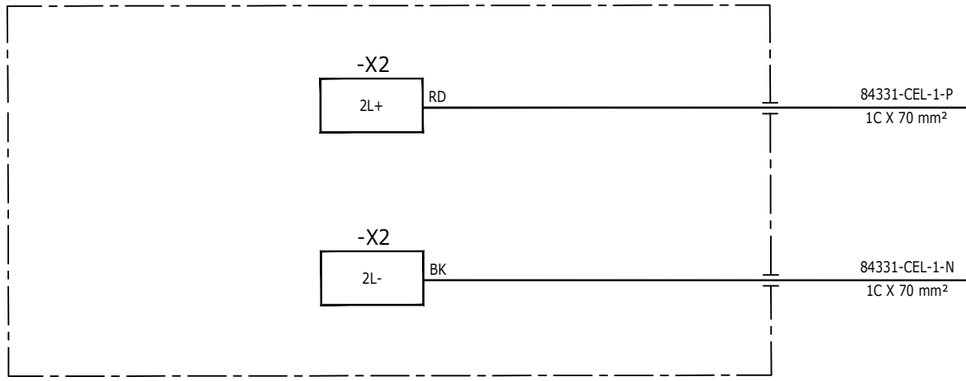
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

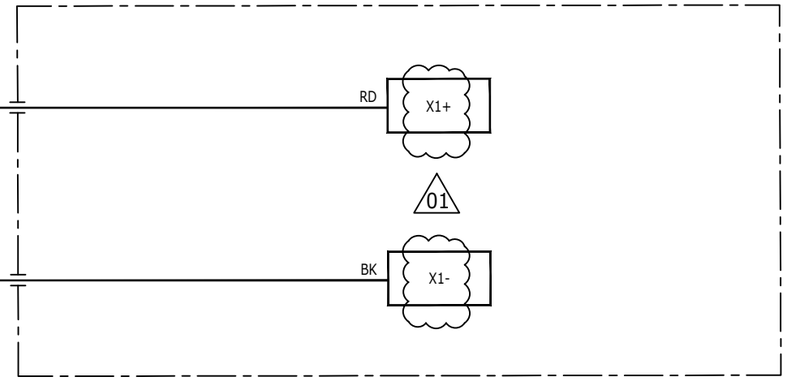
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FROM	TO

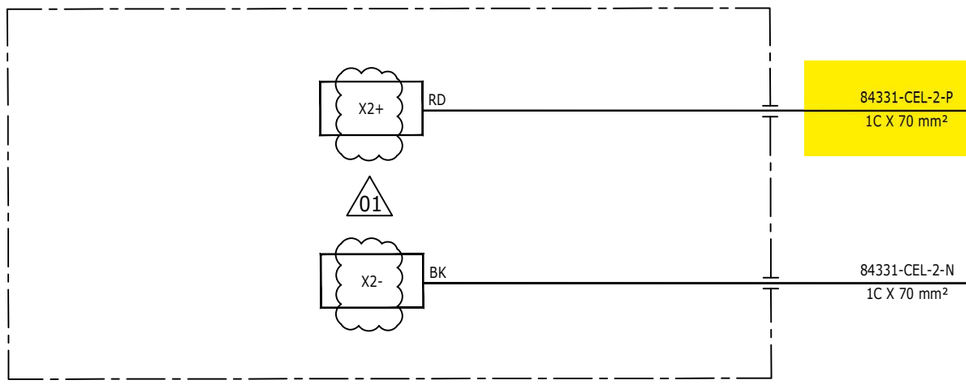
DESCRIPTION: AC UPS PAS - CHARGER-A
TAG NUMBER: BC-200F3A



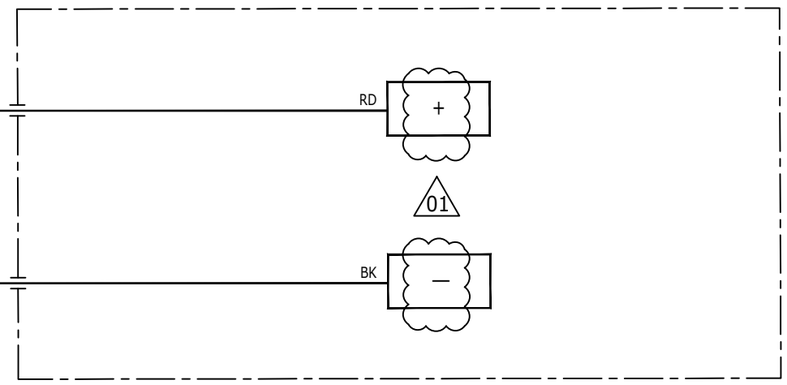
DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A



DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A



DESCRIPTION: AC UPS PAS - BATTERY-A
TAG NUMBER: BA-200F3A



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
AC UPS PAS – CHARGER–A & BATTERY ISOLATOR–A

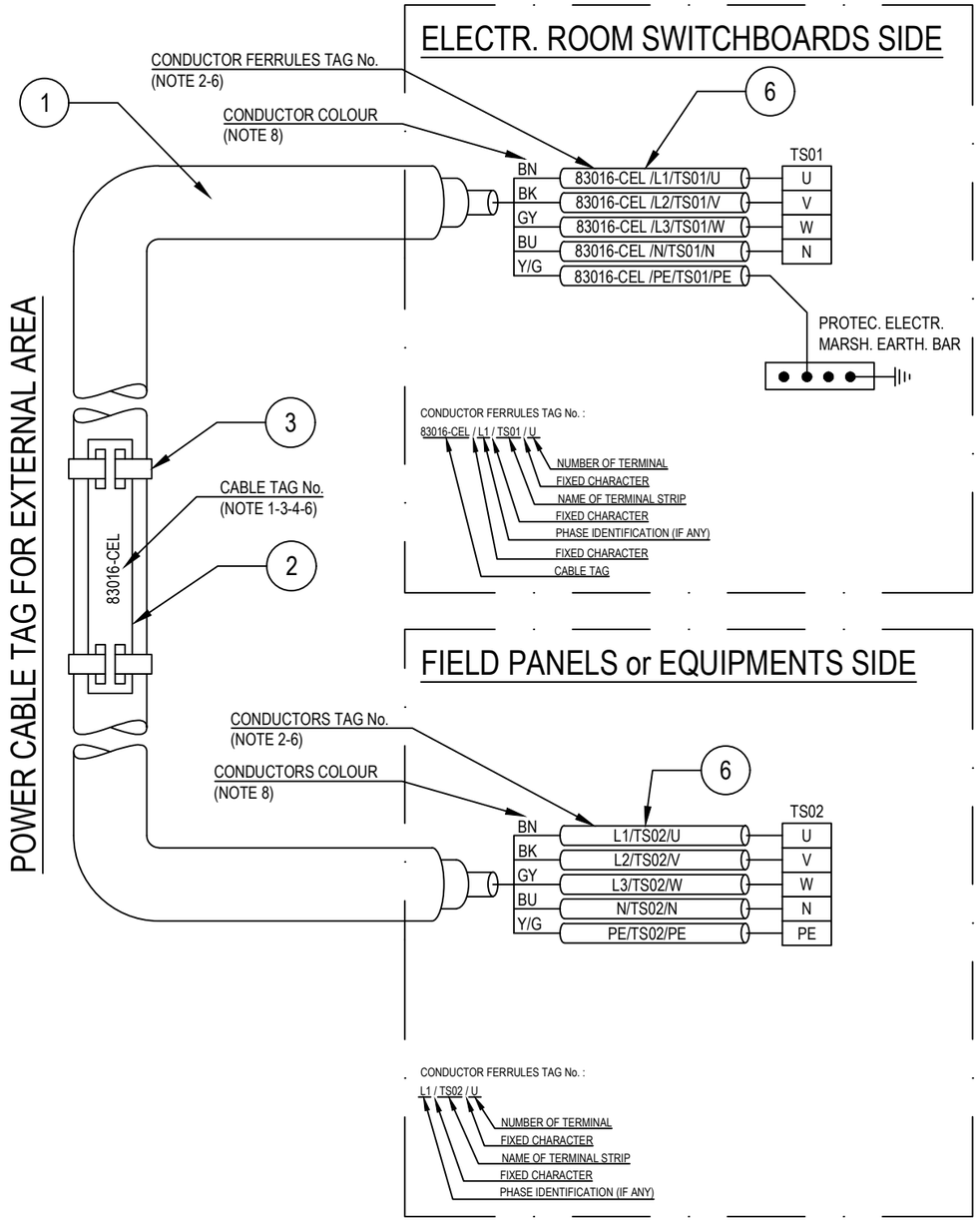
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90–DDL–EL–DG–20149 | SHEET 061 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20162 Rev. 01

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.

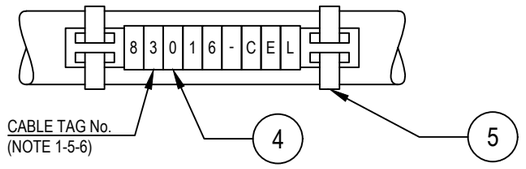
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

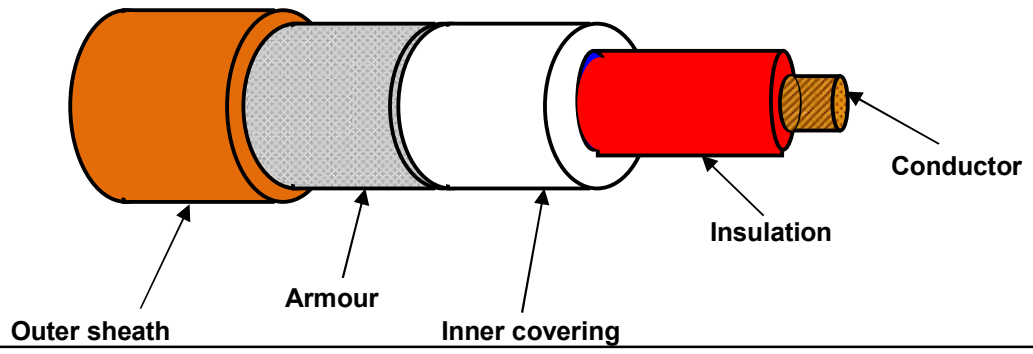
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84331-CEL-2-P	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	BA-200F3A	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	Lower Deck (B-300)	ELECV24-1X70	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 1Cx70mm² - Orange (Ins. Red) - DC	T2_M25S_Double			T2_M25S_Double				L-300-101-LVT-056 / L-300-101-LVT-049 / L-600-101-LVT-036 / L-300-101-LVT-045

FLEI s.r.l.

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

1CX70 - DC POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductor :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape/s (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Core colour code :	Red	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Not Required	
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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 1CX70 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 :	(15,3 ± 10%) mm	
Over Armour diameter :	(16,5 ± 10%) mm	
Outer diameter :	(19,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Core - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 380 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	84331-CEL-2-N	: AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-	Dwg	123A90-DDL-EL-LIS-20148		
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)	Module	LD_B-300		
TASK	code	C10000645	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	1X70 mm2	Color	Orange
From	CB-200F3A	To	BA-200F3A		

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.	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).	OK
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	84331-CEL-2-N	: AC UPS PAS - Battery Isolator-A / AC UPS PAS - Battery-			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000645		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

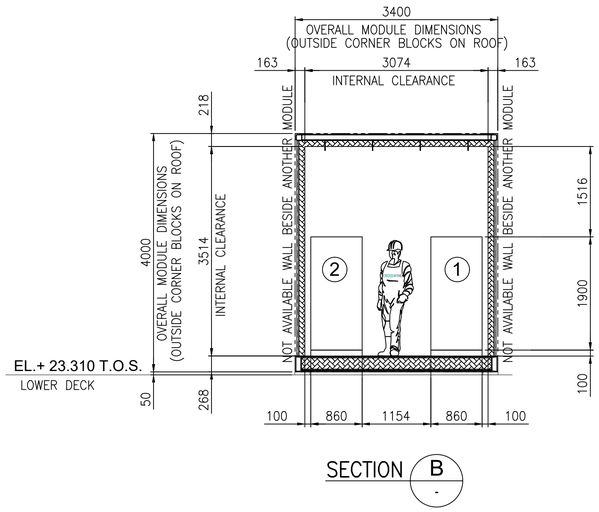
CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.5	
6		PH 2	NA	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.5	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		NA	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	NA	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

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

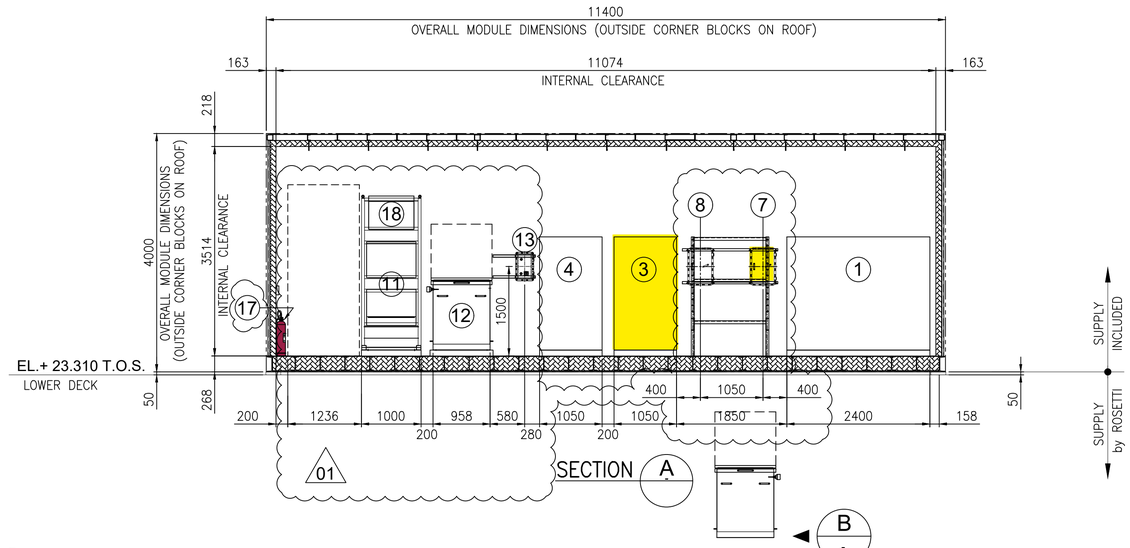
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-29T15:59:22.159Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:41:02.691Z	

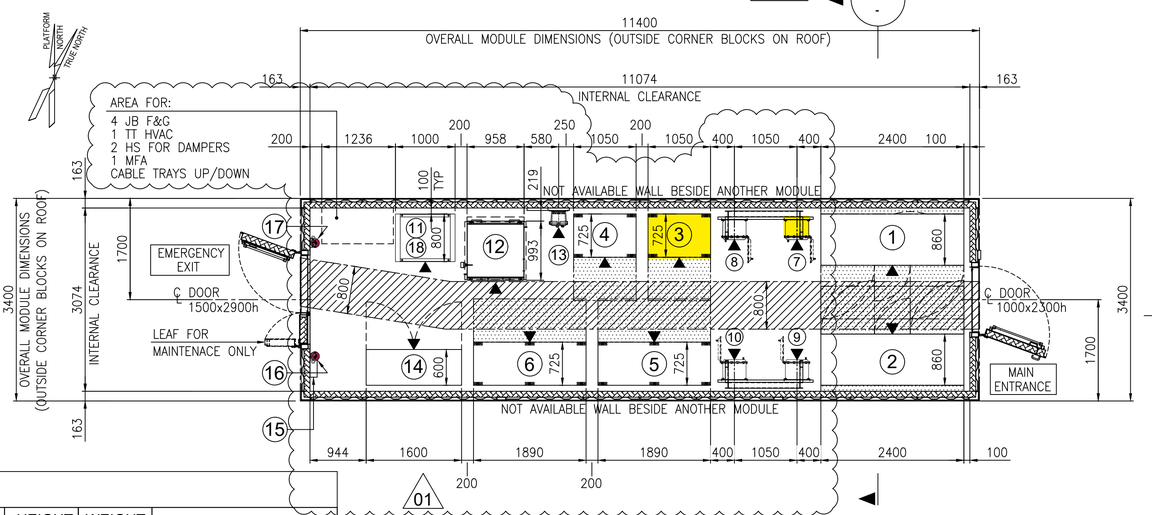
DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01



SECTION B



SECTION A



A

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

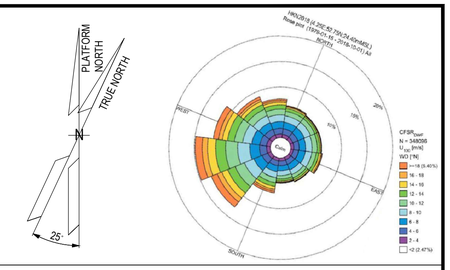
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

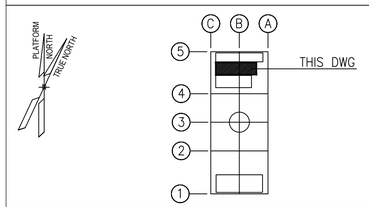
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

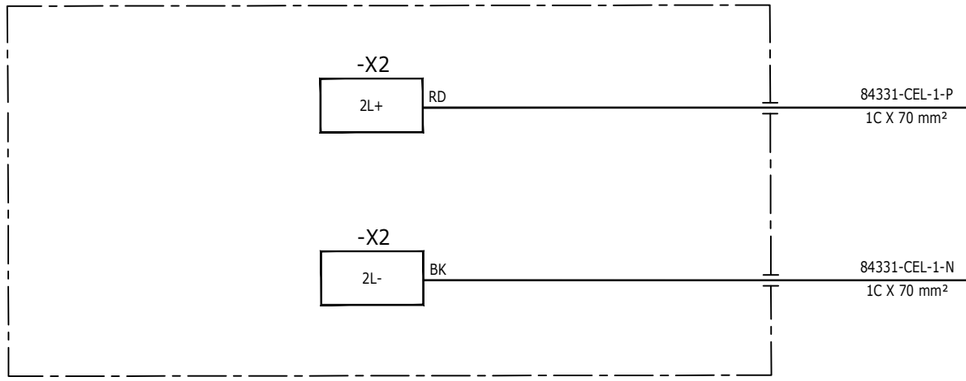
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

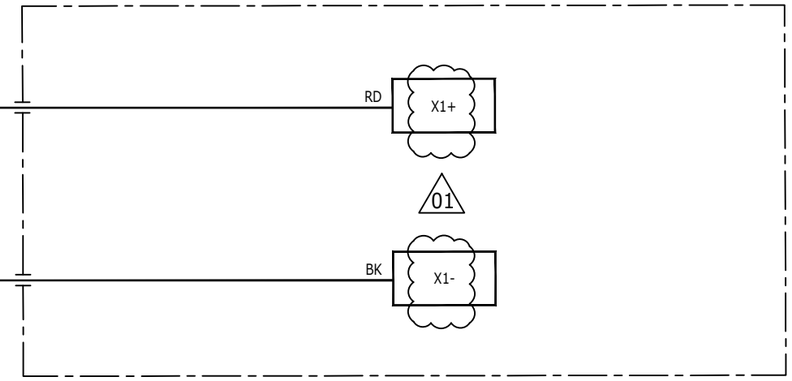
File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

FROM	TO

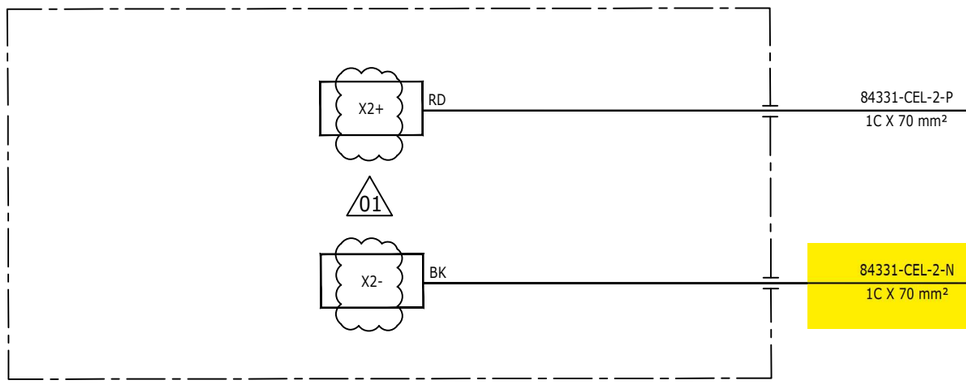
DESCRIPTION: AC UPS PAS - CHARGER-A
TAG NUMBER: BC-200F3A



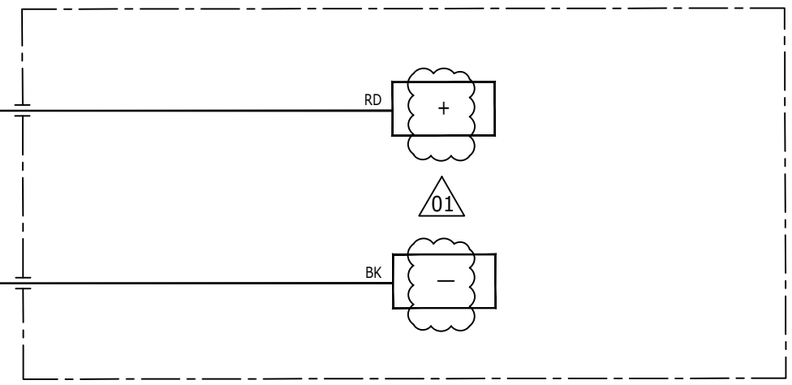
DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A



DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A



DESCRIPTION: AC UPS PAS - BATTERY-A
TAG NUMBER: BA-200F3A



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
AC UPS PAS – CHARGER–A & BATTERY ISOLATOR–A

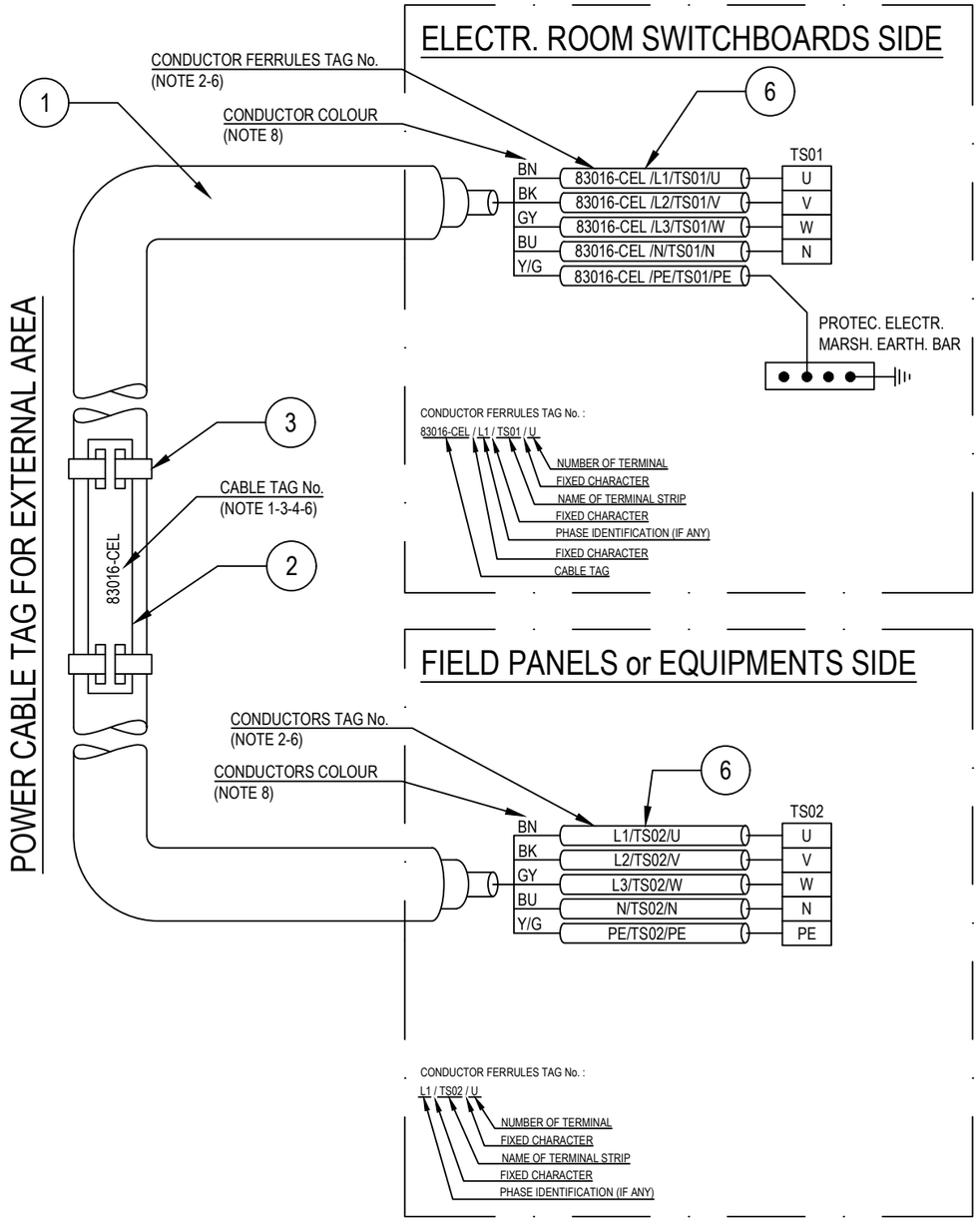
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90–DDL–EL–DG–20149 | SHEET 061 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20162 Rev. 01

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.

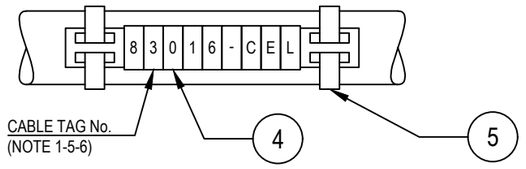
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

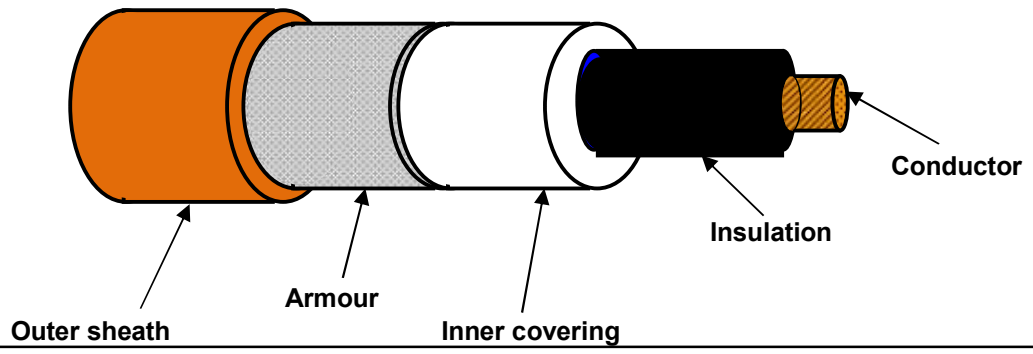
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84331-CEL-2-N	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	BA-200F3A	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	Lower Deck (B-300)	ELECV25-1X70	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 1Cx70mm² - Orange (Ins. Black) - DC	M25S	T2_M25S_Double			T2_M25S_Double				L-300-101-LVT-056 / L-300-101-LVT-049 / L-600-101-LVT-036 / L-300-101-LVT-045

FLEI s.r.l.

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

1CX70 - DC POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductor :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape/s (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Core colour code :	**Black**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Not Required	
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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 1CX70 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 :	(15,3 ± 10%) mm	
Over Armour diameter :	(16,5 ± 10%) mm	
Outer diameter :	(19,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Core - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 380 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	84332-CEL-1-P	: AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)		Module	LD_B-300	
TASK	code	C10000646	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	1X70 mm2	Color	Orange
From	BC-200F3B	To	CB-200F3B		

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.	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).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
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	PL
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

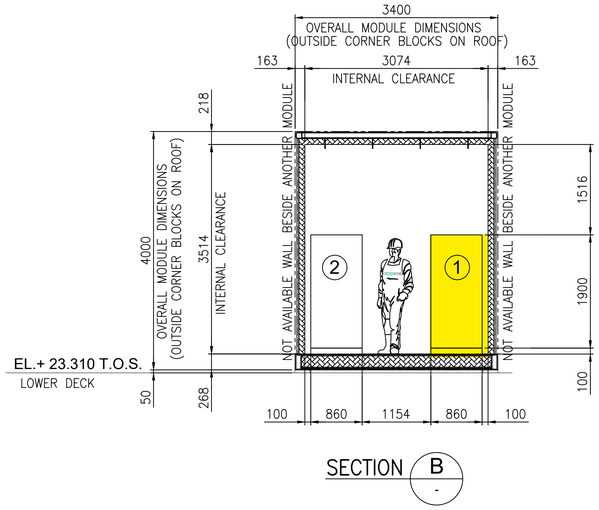
ITEM	Tag	84332-CEL-1-P	: AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	
TASK	code	C10000646		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.5	
6		PH 2	NA	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.5	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		NA	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	NA	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

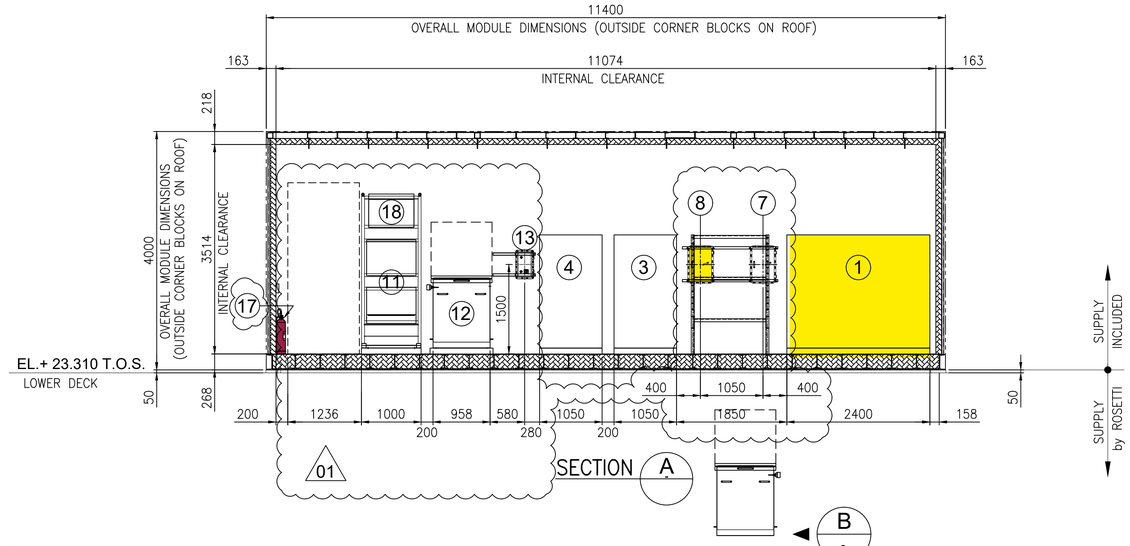
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:56:56.939Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:42:26.568Z	

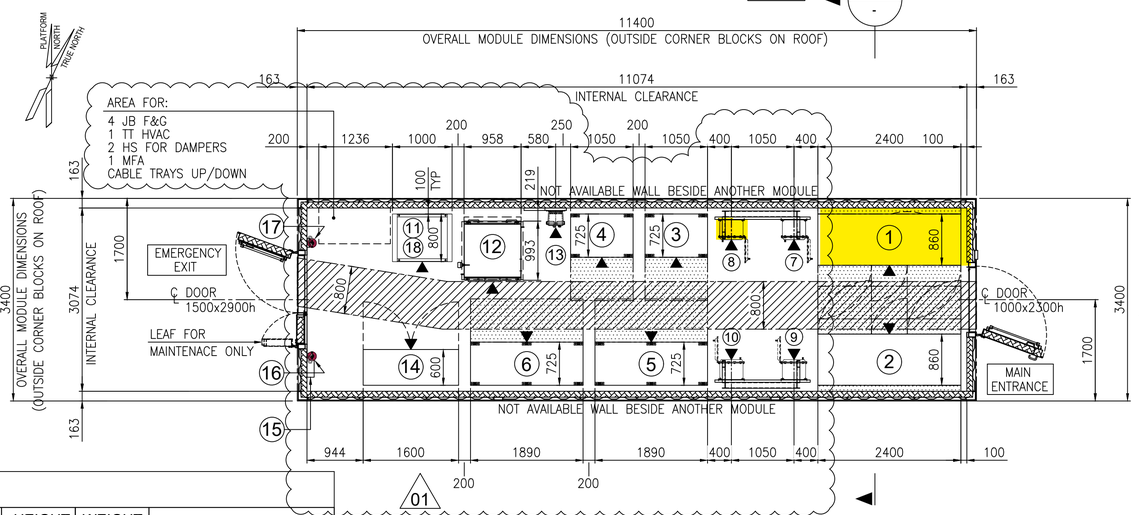


SECTION B -



01

SECTION A -



EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

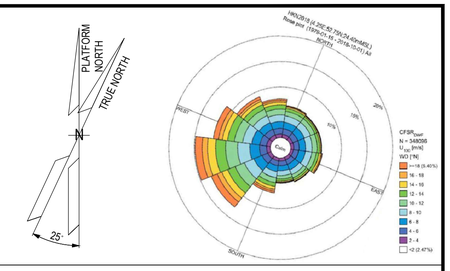
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
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12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

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   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

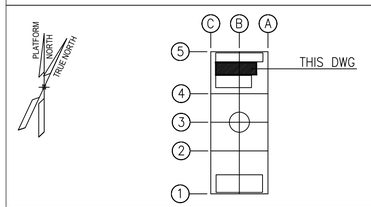
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24

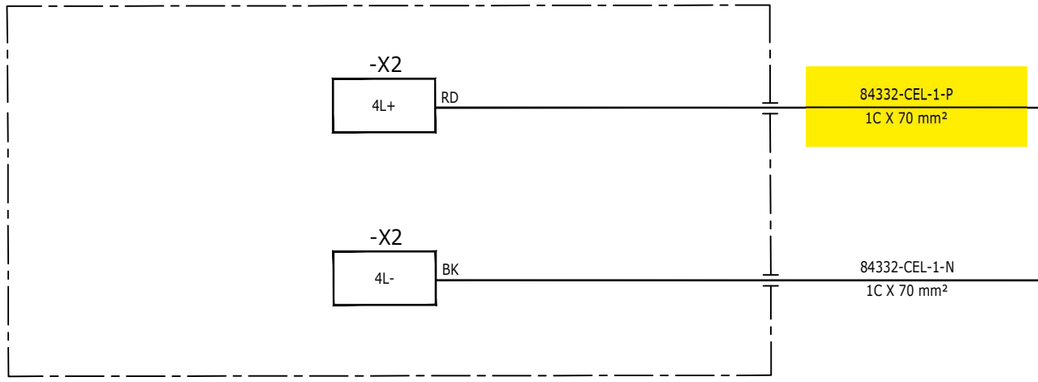
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

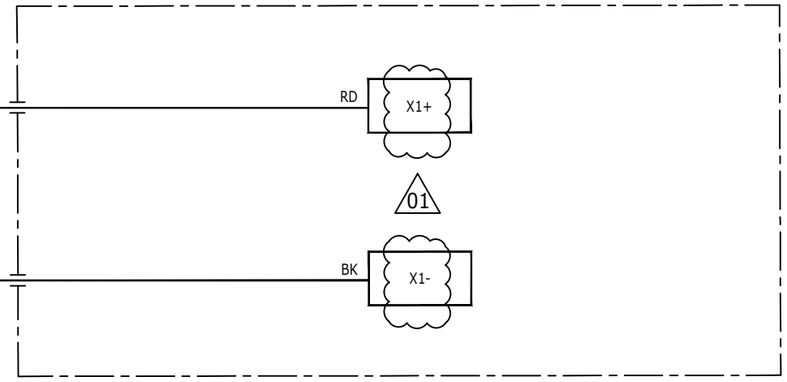
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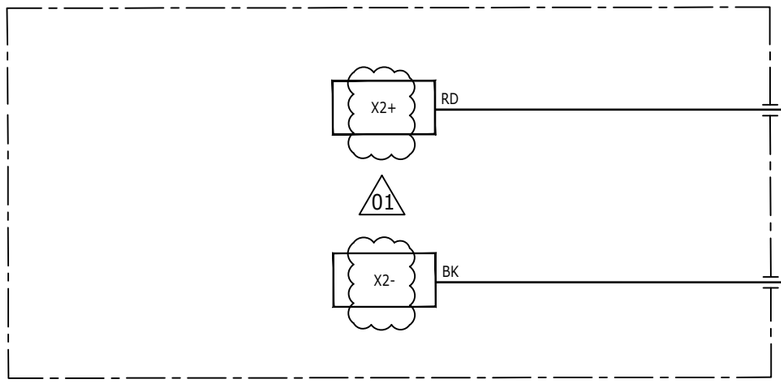
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TAG NUMBER: BC-200F3B



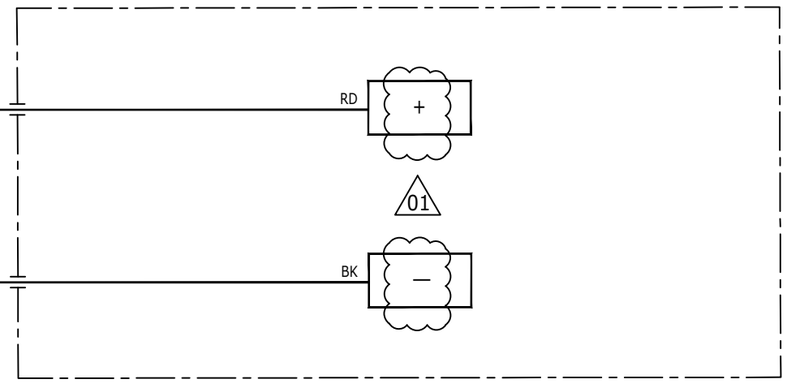
DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B



DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B



DESCRIPTION: AC UPS PAS - BATTERY-B
TAG NUMBER: BA-200F3B



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
AC UPS PAS – CHARGER–B & BATTERY ISOLATOR–B

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

SCALE : 1:X

A3

DRAWING NO. 123A90–DDL–EL–DG–20149

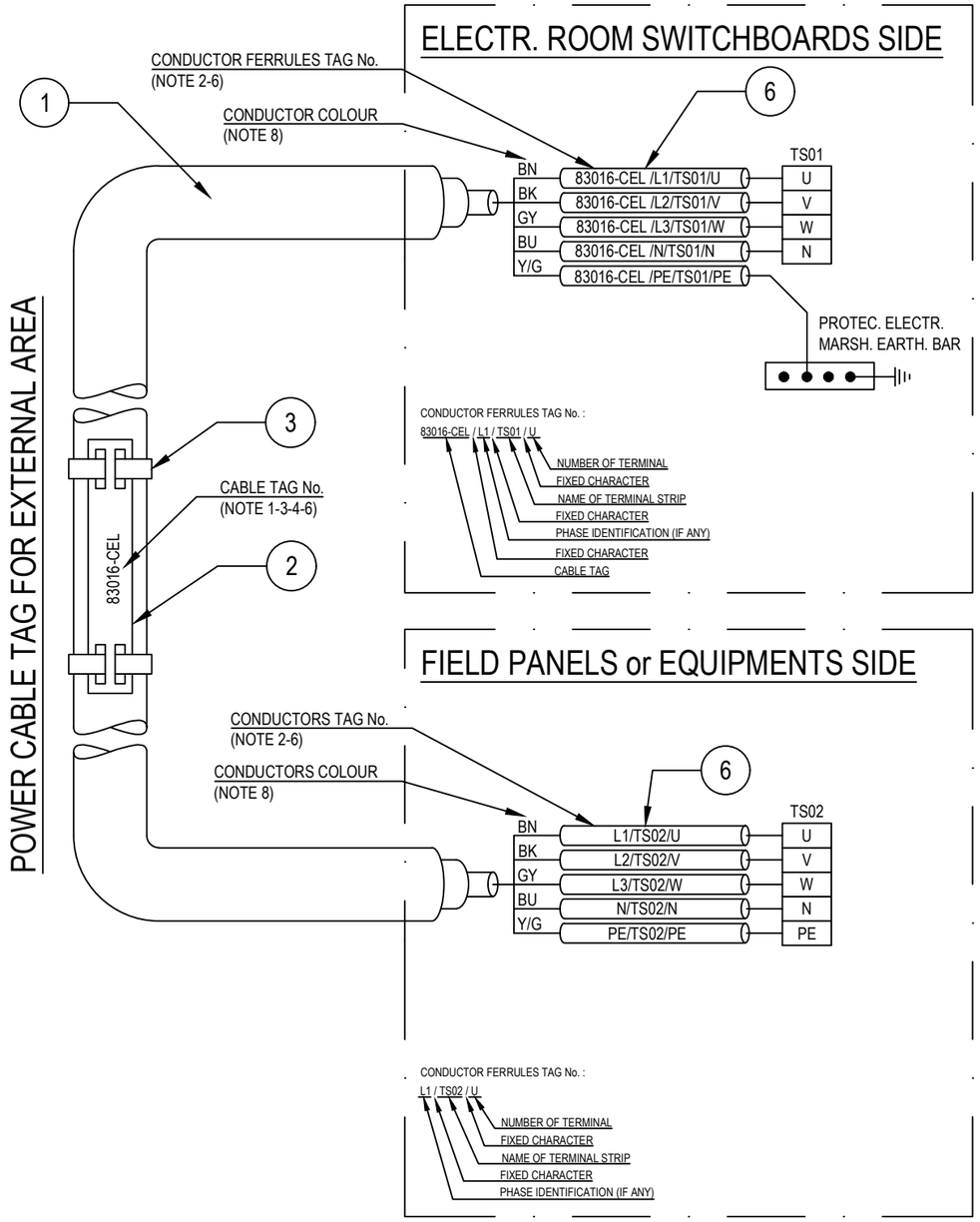
SHEET 062

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20162 Rev. 01

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.

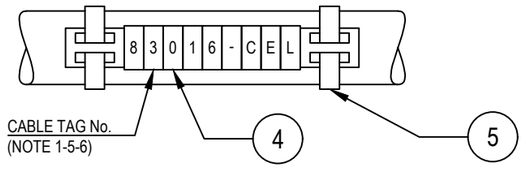
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

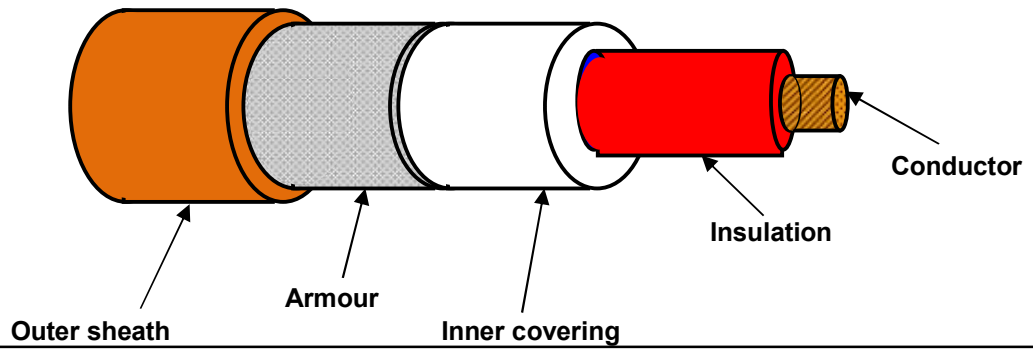
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84332-CEL-1-P	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						BC-200F3B	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	CB-200F3B	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	ELECV24-1X70	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 1Cx70mm² - Orange (Ins. Red) - DC	T2_M25S_Double			T2_M25S_Double				L-450-101-LVT-040 / L-600-101-LVT-036 / L-300-101-LVT-049 / L-300-101-LVT-056

FLEI s.r.l.

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

1CX70 - DC POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductor :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape/s (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Core colour code :	Red	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Not Required	
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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 1CX70 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 :	(15,3 ± 10%) mm	
Over Armour diameter :	(16,5 ± 10%) mm	
Outer diameter :	(19,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Core - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 380 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	84332-CEL-1-N	: AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)		Module	LD_B-300	
TASK	code	C10000647	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	1X70 mm2	Color	Orange
From	BC-200F3B	To	CB-200F3B		

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.	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).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
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

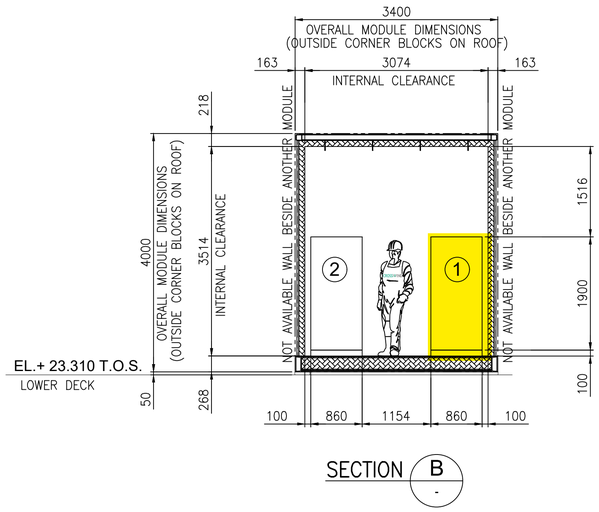
ITEM	Tag	84332-CEL-1-N	: AC UPS PAS- Charger-B / AC UPS PAS - Battery Isolator-B			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	
TASK	code	C10000647		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.6	
6		PH 2	NA	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.6	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		NA	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	NA	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

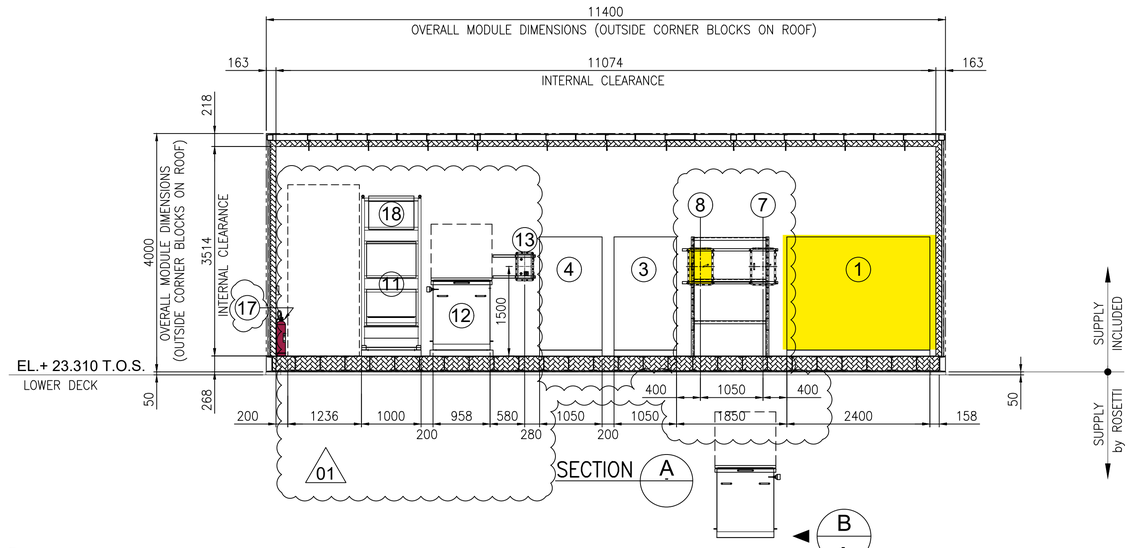
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments:

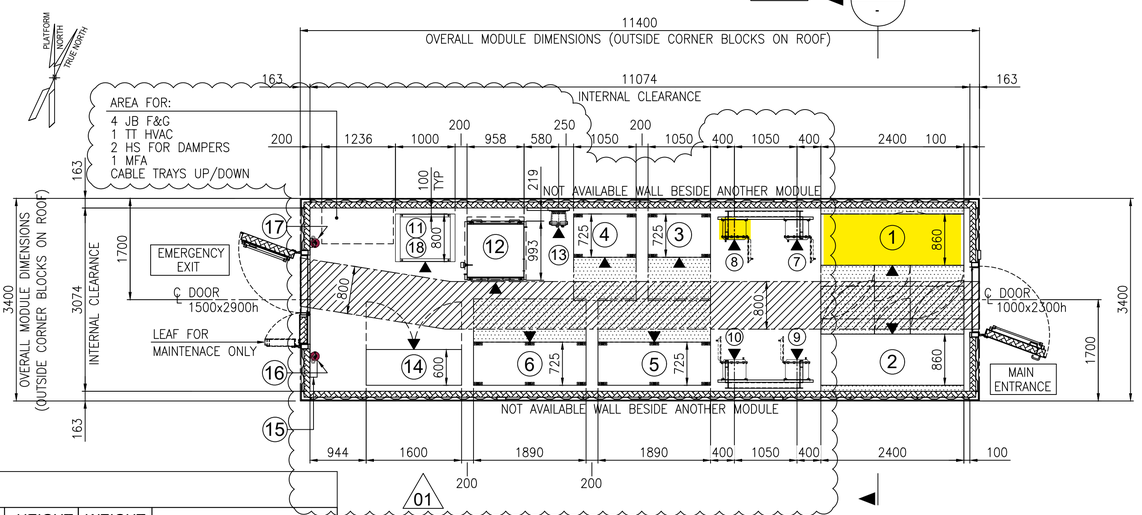
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICSI IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T06:57:21.262Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:43:14.966Z	



SECTION B -



SECTION A -



EQUIPMENT LAYOUT
"B–300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

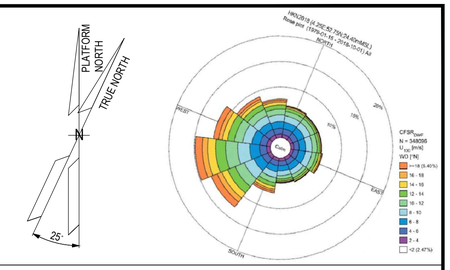
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B–300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049–AR–DA–00016
   - "B–300" – DETAILED DRAWINGS DOC. N. 1724000049–AR–DD–00020

LEGEND

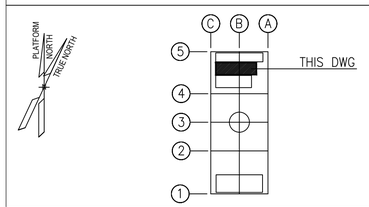
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
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"B–300" DETAILED DRAWINGS	1724000049–AR–DD–00020
"B–300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90–DDL–AR–DL–10022
PLOT PLAN – LOWER & UPPER DECK	123A90–DDL–PP–DL–70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

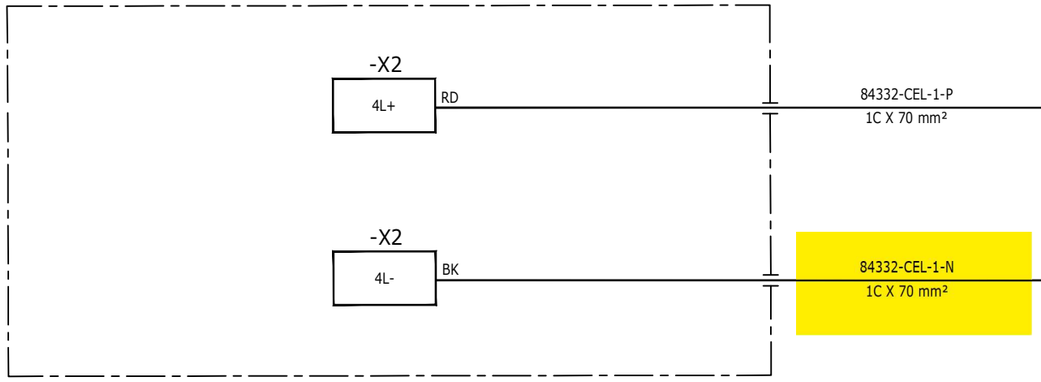
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90–DDL–EL–DL–20106	SHEET 001	REV. 01

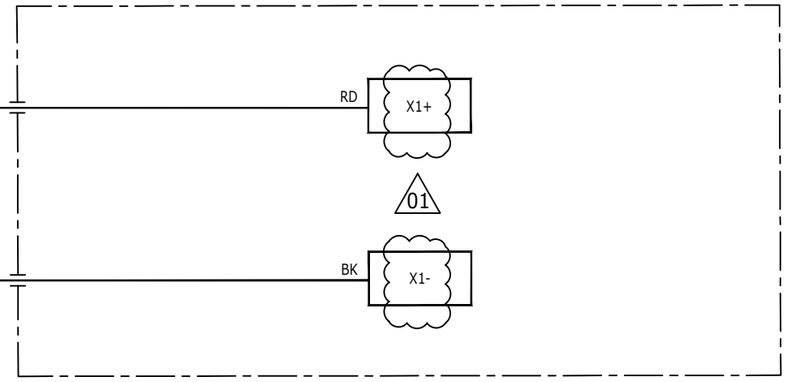
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REV. 01
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FROM	TO

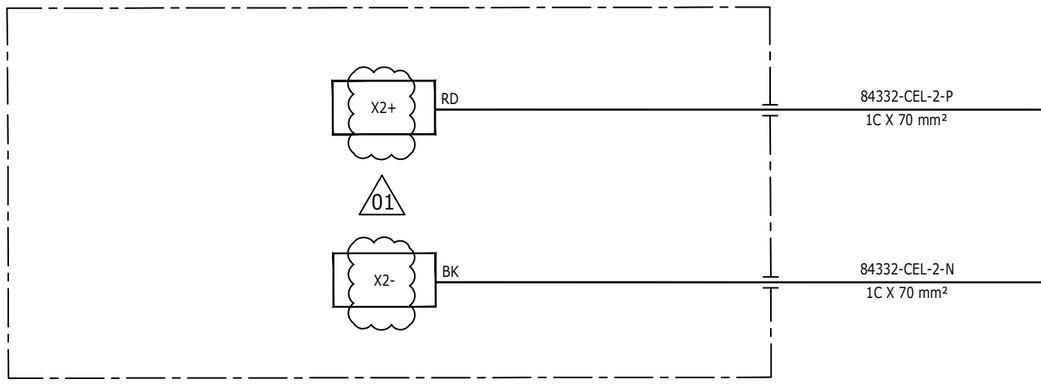
DESCRIPTION: AC UPS PAS- CHARGER-B
TAG NUMBER: BC-200F3B



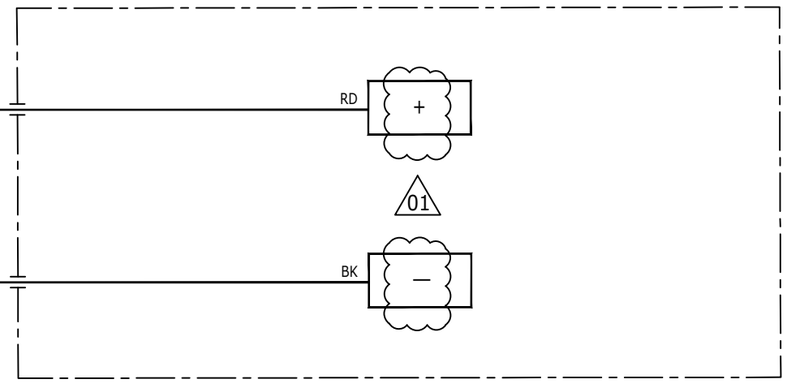
DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B



DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B



DESCRIPTION: AC UPS PAS - BATTERY-B
TAG NUMBER: BA-200F3B



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
AC UPS PAS – CHARGER–B & BATTERY ISOLATOR–B

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

SCALE : 1:X

A3

DRAWING NO. 123A90–DDL–EL–DG–20149

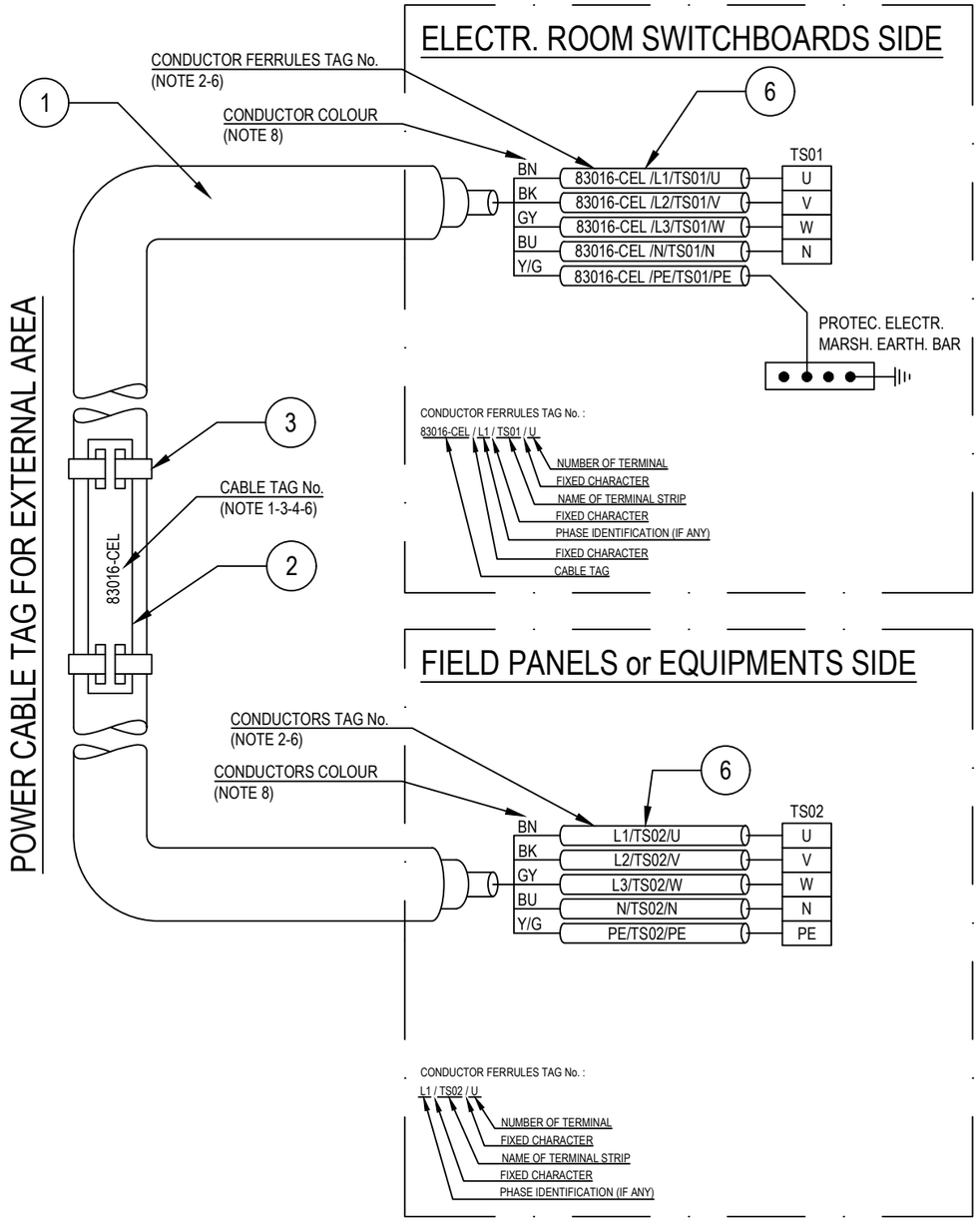
SHEET 062

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20162 Rev. 01

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.

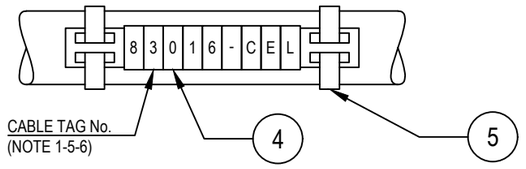
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

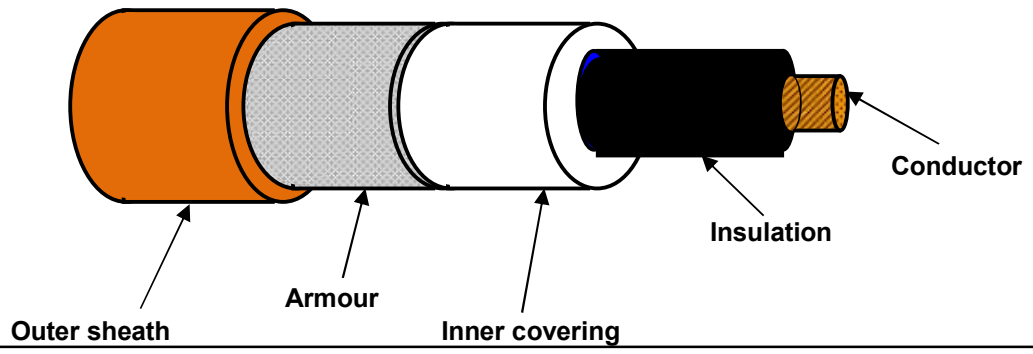
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84332-CEL-1-N	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						BC-200F3B	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	CB-200F3B	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	ELECV25-1X70	Cable Cu CI.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 1Cx70mm² - Orange (Ins. Black) - DC	T2_M25S_Double			T2_M25S_Double				L-450-101-LVT-040 / L-600-101-LVT-036 / L-300-101-LVT-049 / L-300-101-LVT-056

FLEI s.r.l.

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

1CX70 - DC POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductor :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape/s (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Core colour code :	**Black**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Not Required	
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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 1CX70 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 :	(15,3 ± 10%) mm	
Over Armour diameter :	(16,5 ± 10%) mm	
Outer diameter :	(19,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Core - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 380 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	84332-CEL-2-P	: AC UPS PAS - Battery Isolator-B / AC UPS PAS - Battery-I			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000648		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	1X70 mm2	Color	Orange
From	CB-200F3B	To	BA-200F3B		

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.	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).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
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

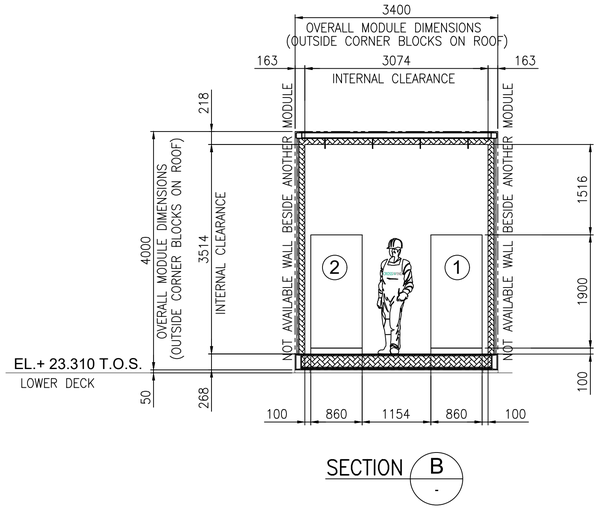
ITEM	Tag	84332-CEL-2-P	: AC UPS PAS - Battery Isolator-B / AC UPS PAS - Battery-I			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000648		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.5	
6		PH 2	NA	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.5	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		NA	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	NA	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

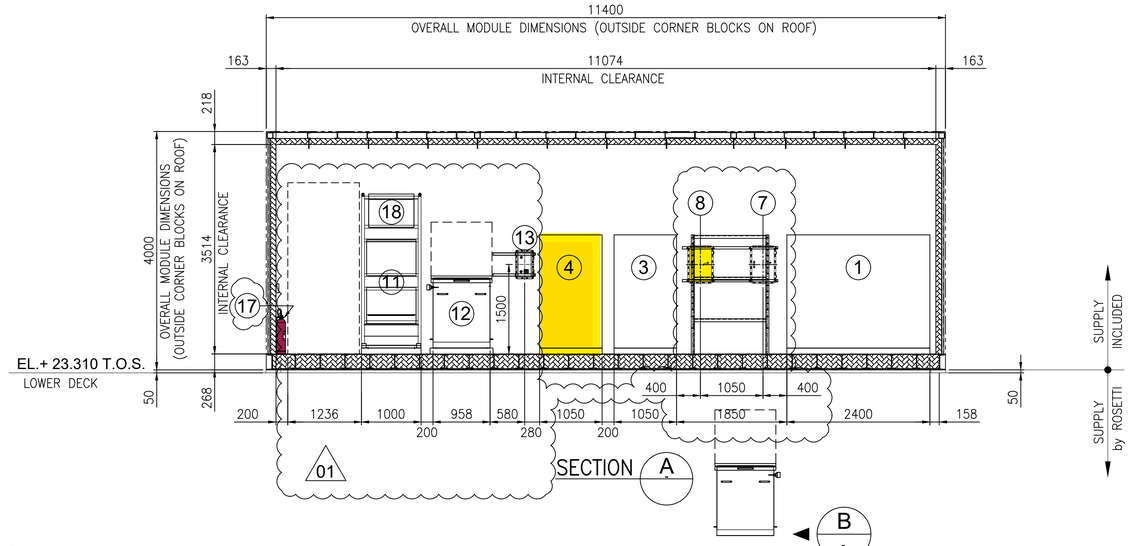
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments:

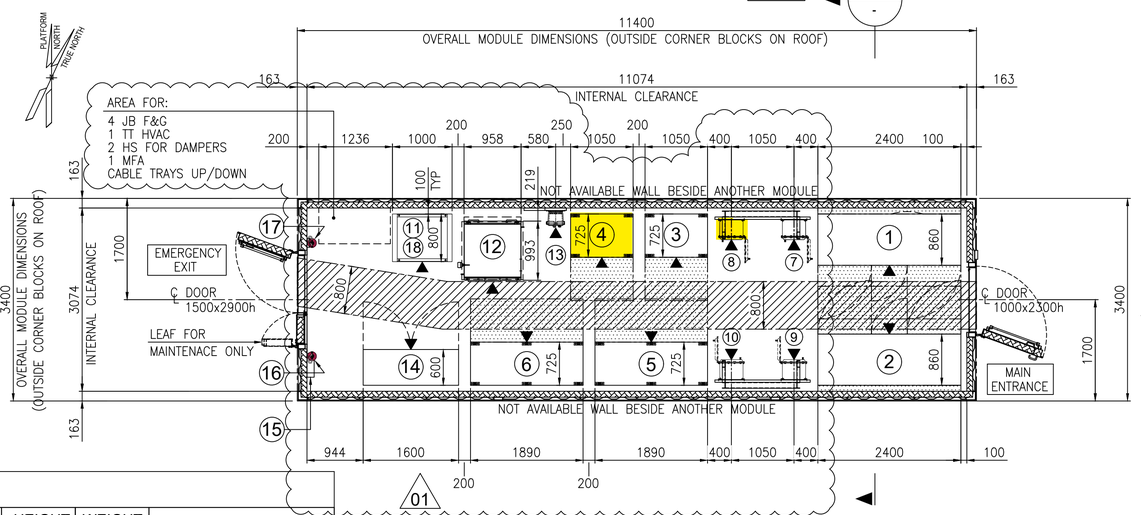
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-29T15:59:35.118Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:44:22.909Z	



SECTION B



SECTION A



A

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

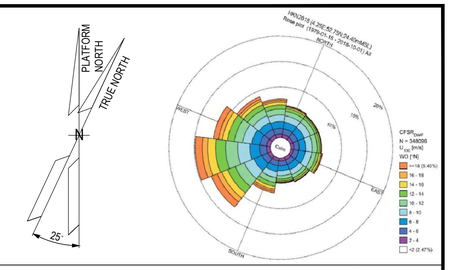
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

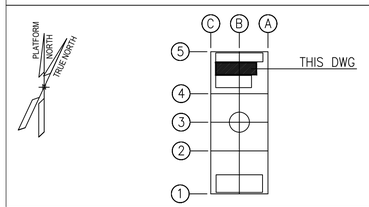
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

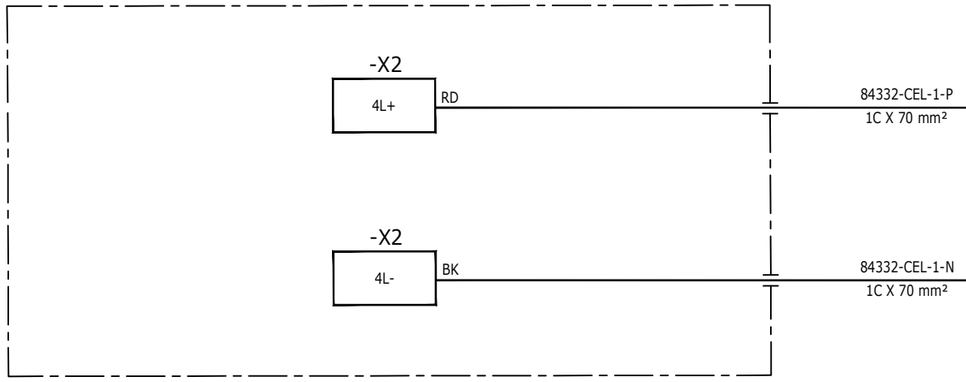
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

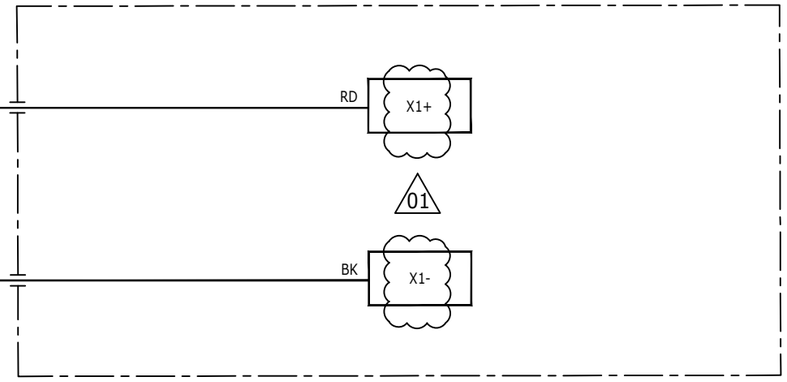
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FROM	TO

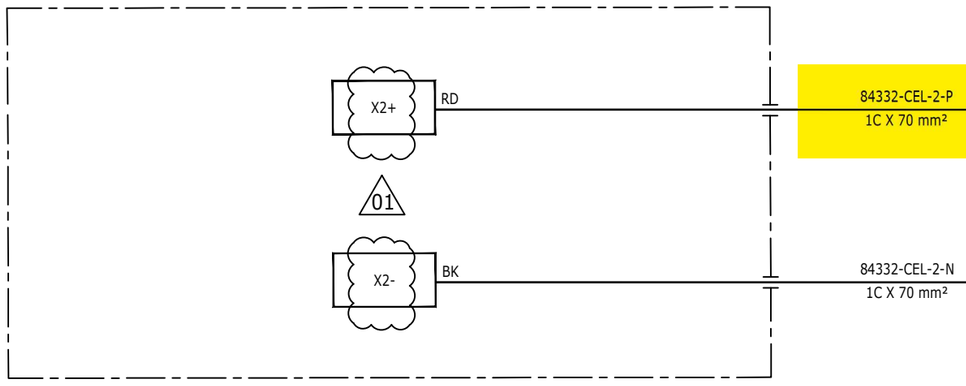
DESCRIPTION: AC UPS PAS- CHARGER-B
TAG NUMBER: BC-200F3B



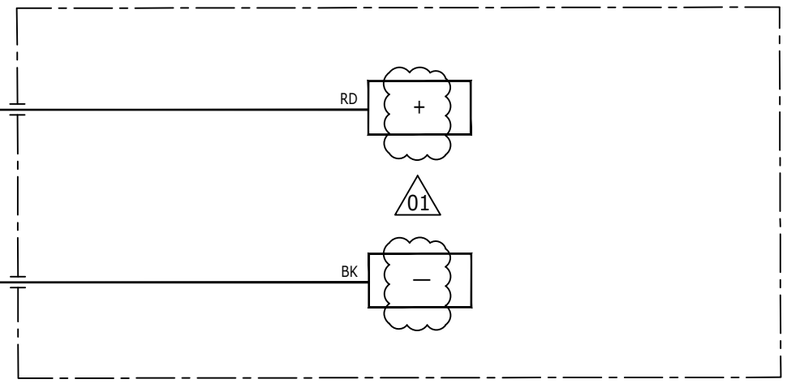
DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B



DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B



DESCRIPTION: AC UPS PAS - BATTERY-B
TAG NUMBER: BA-200F3B



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
AC UPS PAS – CHARGER–B & BATTERY ISOLATOR–B

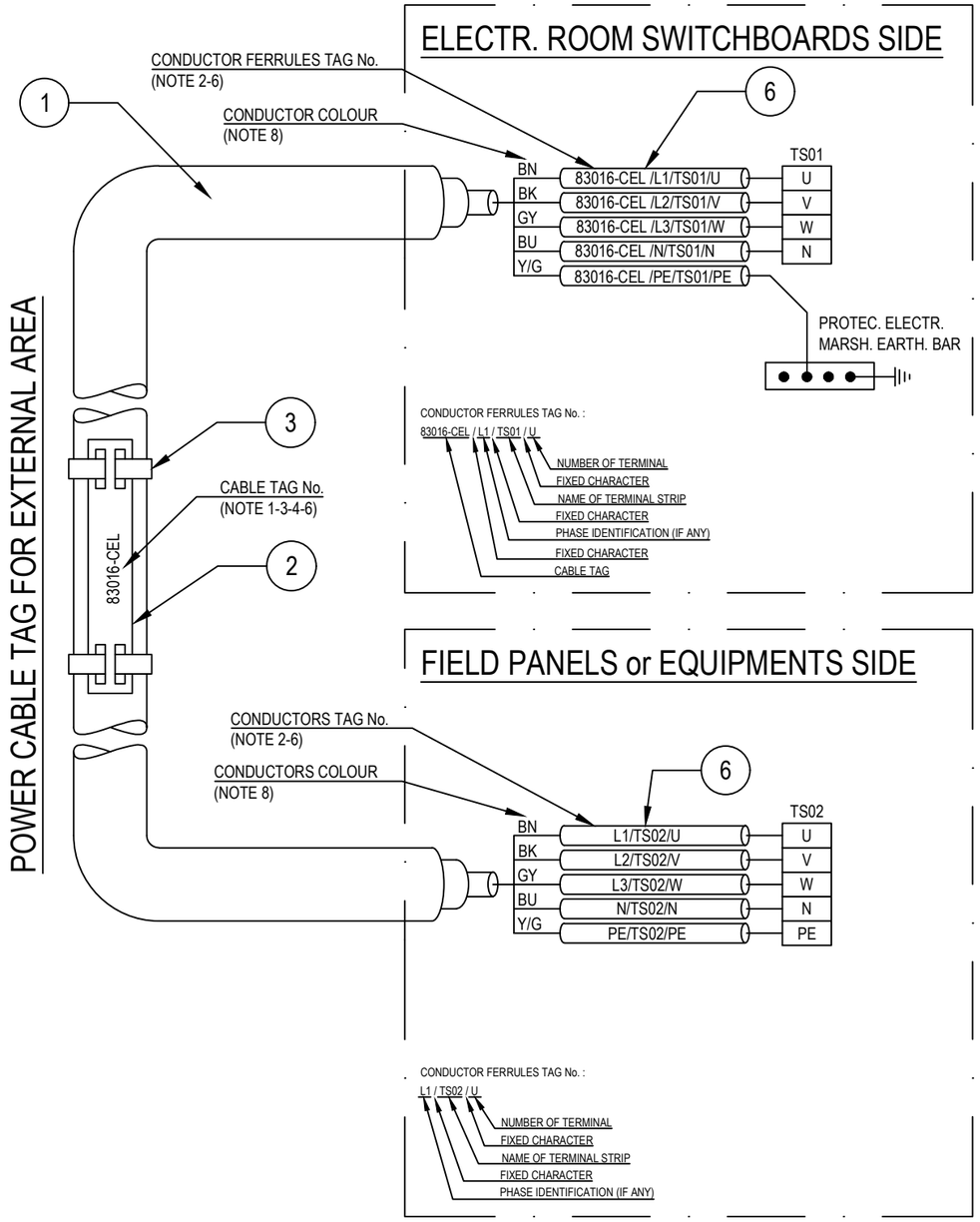
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90–DDL–EL–DG–20149 | SHEET 062 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20162 Rev. 01

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
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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			

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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.

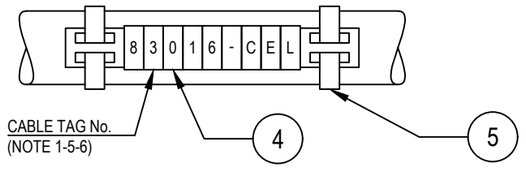
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6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

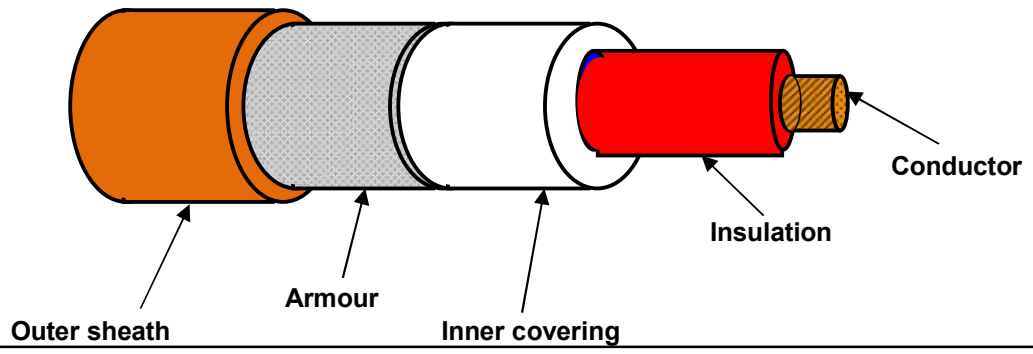
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84332-CEL-2-P	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						CB-200F3B	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	BA-200F3B	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	Lower Deck (B-300)	ELECV24-1X70	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 1Cx70mm² - Orange (Ins. Red) - DC	M25S	T2_M25S_Double			T2_M25S_Double				L-300-101-LVT-056 / L-300-101-LVT-049 / L-600-101-LVT-036 / L-300-101-LVT-046

FLEI s.r.l.

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

1CX70 - DC POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductor :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape/s (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Core colour code :	Red	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Not Required	
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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 1CX70 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 :	(15,3 ± 10%) mm	
Over Armour diameter :	(16,5 ± 10%) mm	
Outer diameter :	(19,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Core - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 380 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	84332-CEL-2-N	: AC UPS PAS - Battery Isolator-B / AC UPS PAS - Battery-I			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000649		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	1X70 mm2	Color	Orange
From	CB-200F3B	To	BA-200F3B		

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.	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).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
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

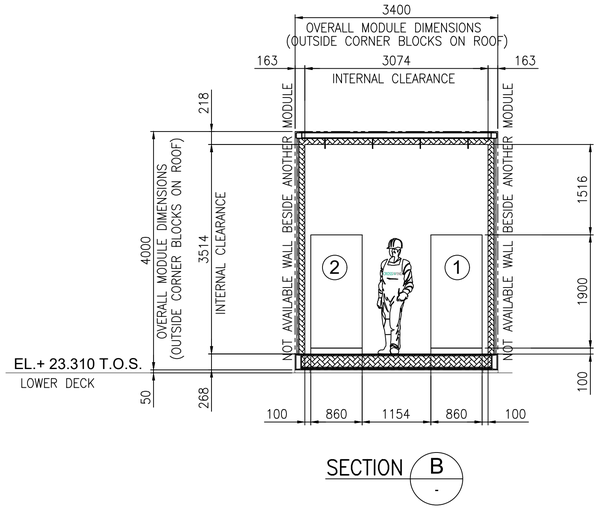
ITEM	Tag	84332-CEL-2-N	: AC UPS PAS - Battery Isolator-B / AC UPS PAS - Battery-I			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000649		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0.5	
6		PH 2	NA	
7		PH 3	NA	
8	ARMOUR CONTINUITY Ω		0.5	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		NA	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	NA	
12		PH3 / PH1-PH2-A-E	NA	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

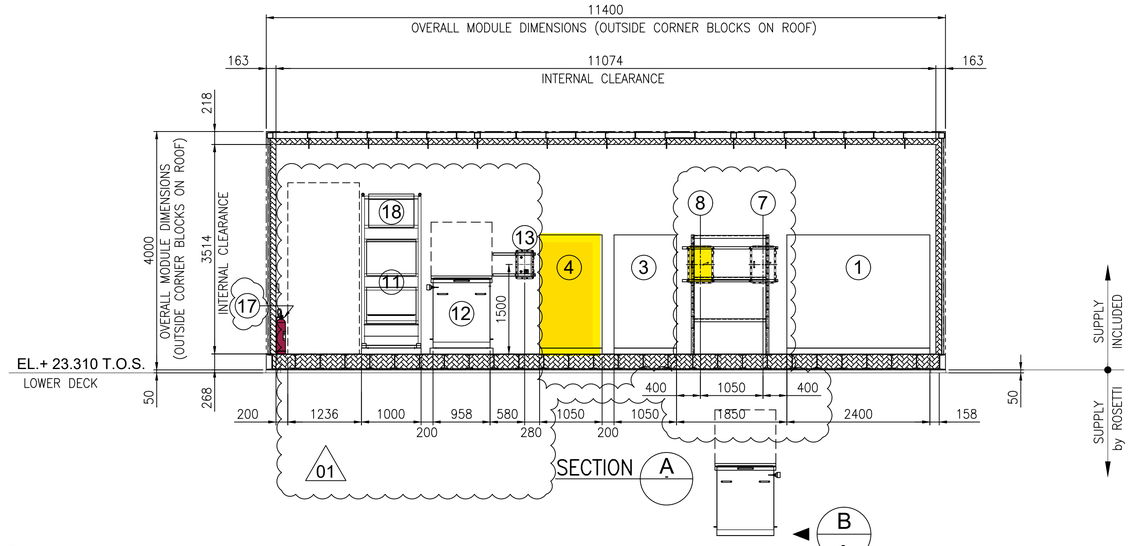
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments:

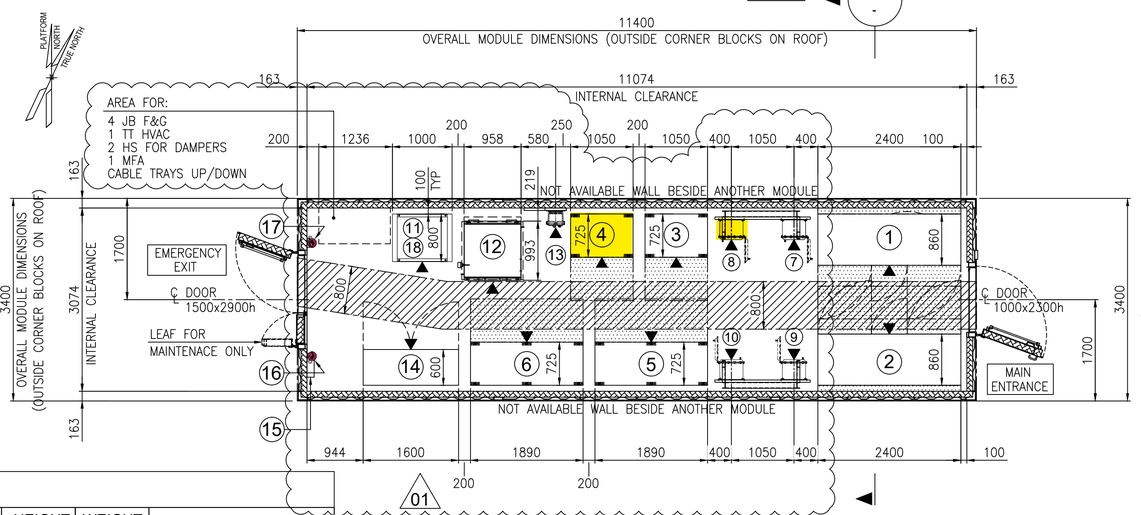
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-29T15:59:49.483Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:45:35.115Z	



SECTION B



SECTION A



A

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

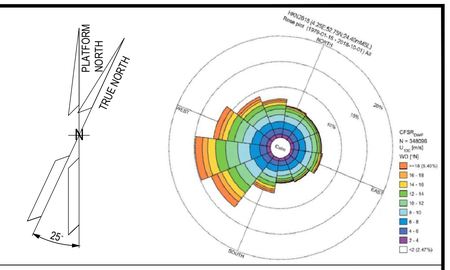
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

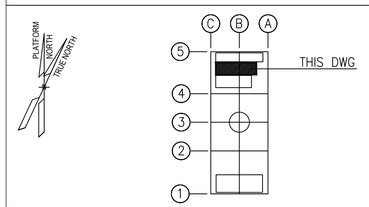
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

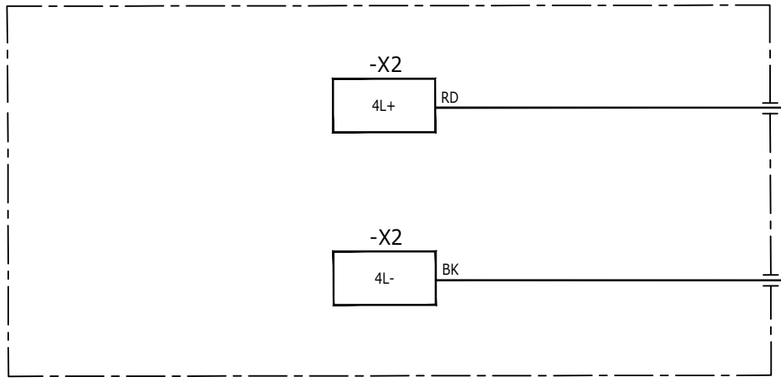
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
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A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

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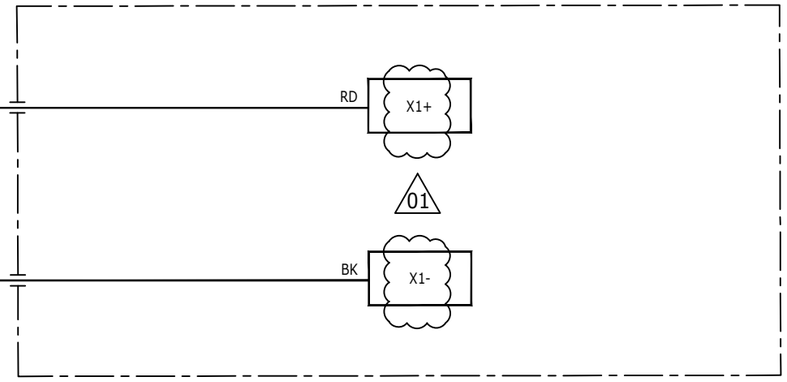
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FROM	TO

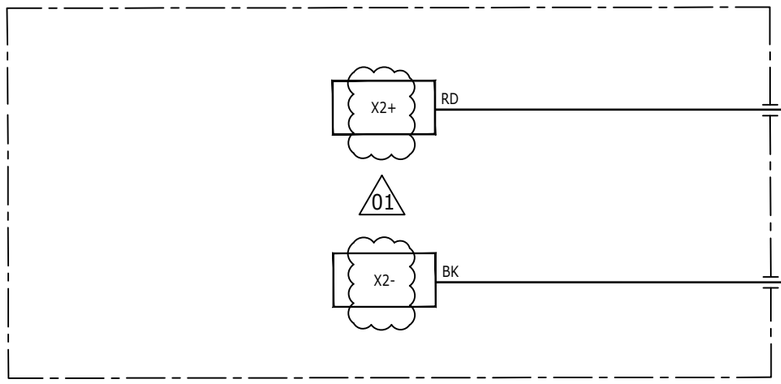
DESCRIPTION: AC UPS PAS- CHARGER-B
TAG NUMBER: BC-200F3B



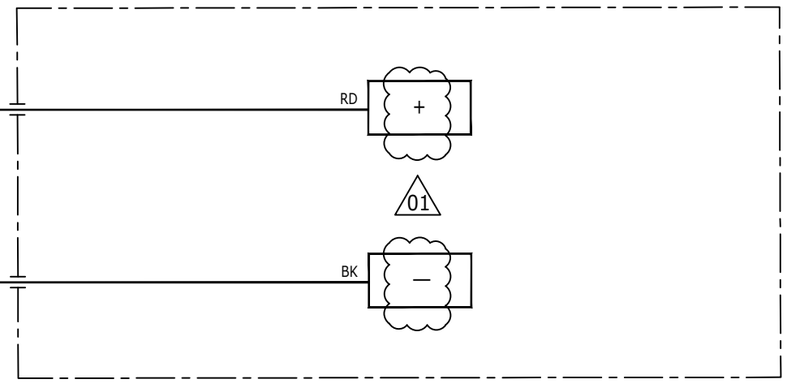
DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B



DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B



DESCRIPTION: AC UPS PAS - BATTERY-B
TAG NUMBER: BA-200F3B



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
AC UPS PAS – CHARGER–B & BATTERY ISOLATOR–B

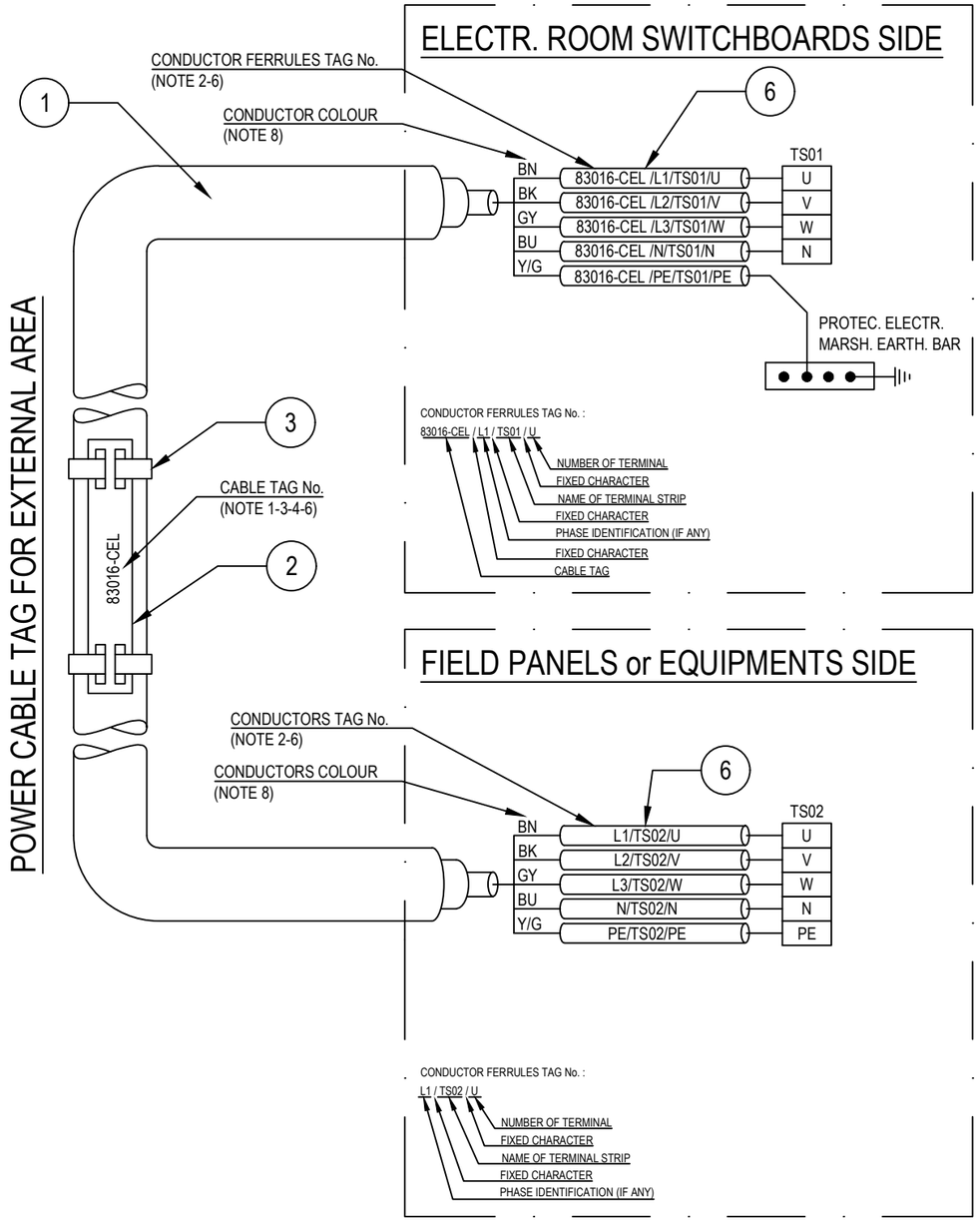
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90–DDL–EL–DG–20149 | SHEET 062 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90–DDL–EL–DG–20162 Rev. 01

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.

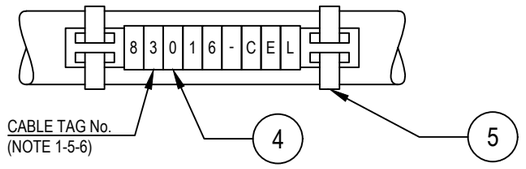
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.: 2_A | DATE: 28/08/24 | SIGNATURE: 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

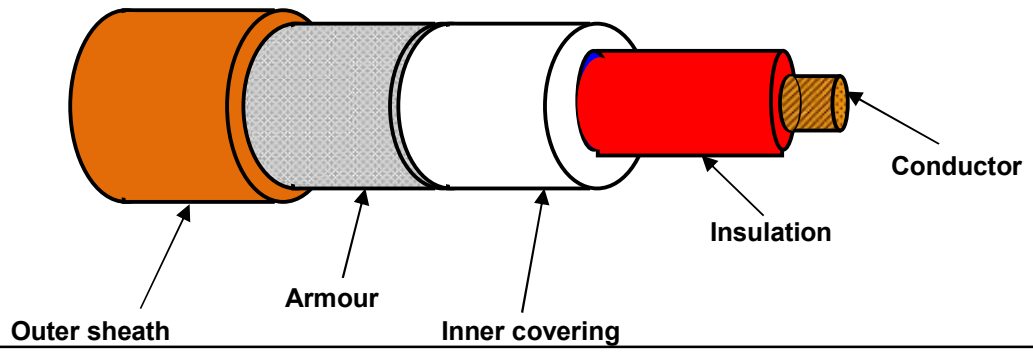
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84332-CEL-2-N	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						CB-200F3B	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	BA-200F3B	Battery Rack GEL VRLA-7Y for AC UPS 35 kVA	Lower Deck (B-300)	ELECV25-1X70	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 1Cx70mm² - Orange (Ins. Black) - DC	M25S	T2_M25S_Double			T2_M25S_Double				L-300-101-LVT-056 / L-300-101-LVT-049 / L-600-101-LVT-036 / L-300-101-LVT-046

FLEI s.r.l.

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

1CX70 - DC POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductor :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape/s (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Core colour code :	Red	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Not Required	
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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 1CX70 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 :	(15,3 ± 10%) mm	
Over Armour diameter :	(16,5 ± 10%) mm	
Outer diameter :	(19,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Core - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 380 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	BA-200F3A	: Battery Rack GEL VRLA-7Y for AC UPS 35 kVA			Dwg	123A90-DDL-EL-DS-20032
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10000848		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX17 Battery

1	Check battery is installed in accordance with manufacturer's instructions with sufficient clearance and accessibility for maintenance.	OK
2	Check battery cells are identified and tagged correctly.	PL
3	Check battery data against data sheet /project specification.	OK
4	Check all nuts and links are fitted, tightened and greased.	OK
5	Check caps for transportation have been removed.	NA
6	Check terminals protecting caps are installed.	OK
7	Check cells interconnections against drawings.	OK
8	Check cable connections.	OK
9	Check all electrolyte levels are correct (if applicable).	NA
10	Check special tools and safety equipment are available (if any).	NA
11	If required produce Red Line Mark Up for "AS BUILT"	

Battery data

Manufacturer :	FAAM	Serial N° :	NA	Battery Type :	FLG 12-150
N° of cells :	18	Cell voltage :	12 V d.c	Battery charger :	10 h
Battery capacity :	150 AH	Battery voltage	216 V d.c	Ambient temp.	20°C

TESTING AND MEASUREMENT INSTRUMENT USED

Type	Serial n°	Calibration certificate	Validity
TORQUE WRENCH 4-20Nm	118751936231191561	278623	02.10.2024

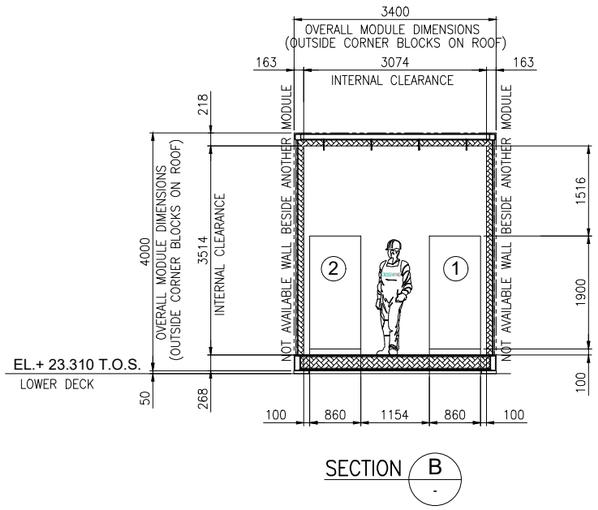
Cell number	1	2	3	4	5	6	7	8	9	10	11	12
Connection tightening	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm
Electrolyte level	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cell number	13	14	15	16	17	18	19	20	21	22	23	24
Connection tightening	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm						
Electrolyte level	NA	NA	NA	NA	NA	NA						
Cell number	25	26	27	28	29	30	31	32	33	34	35	36
Connection tightening												
Electrolyte level												
Cell number	37	38	39	40	41	42	43	44	45	46	47	48
Connection tightening												
Electrolyte level												

Comments:

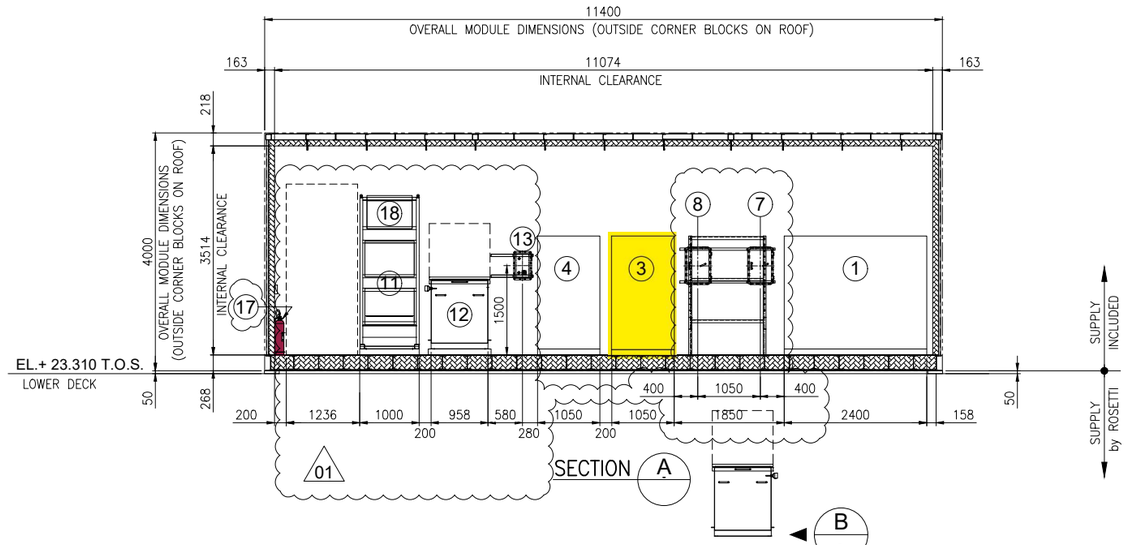
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-29T16:01:50.786Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:48:09.360Z	

DRAWING NO. 123A90-DDL-EL-DL-20106

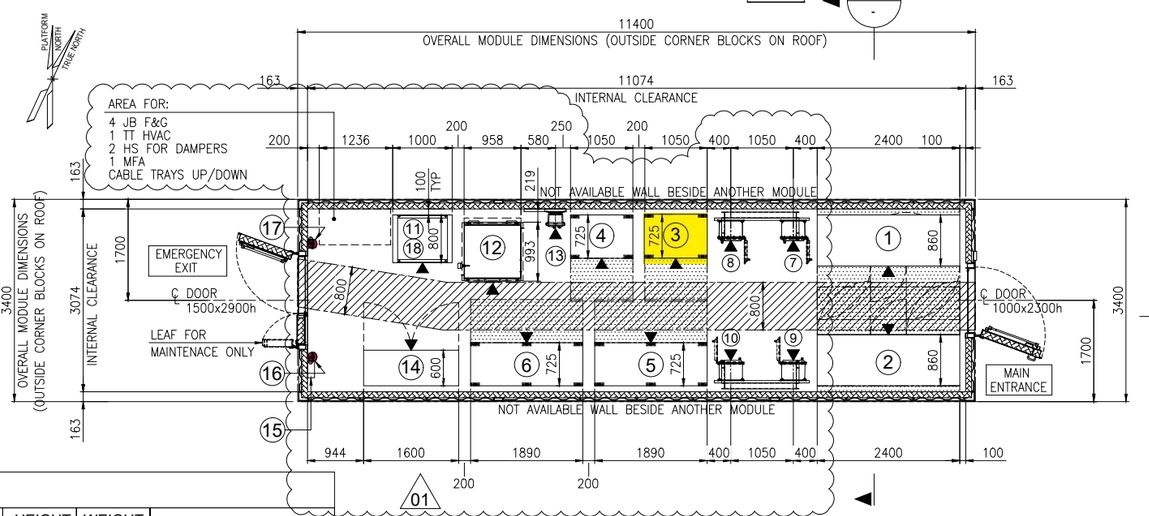
REV. 01



SECTION B -



SECTION A -



A -

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

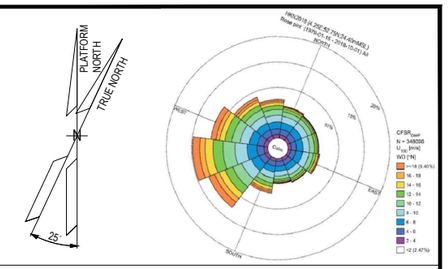
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA 01	450	341	632	100	
11	NC-200F2	NAVAID PANEL	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

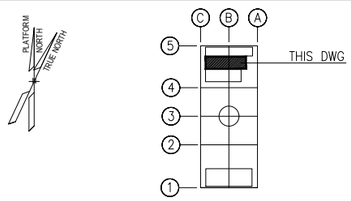
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

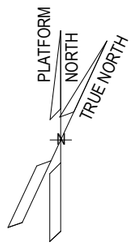
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24

A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

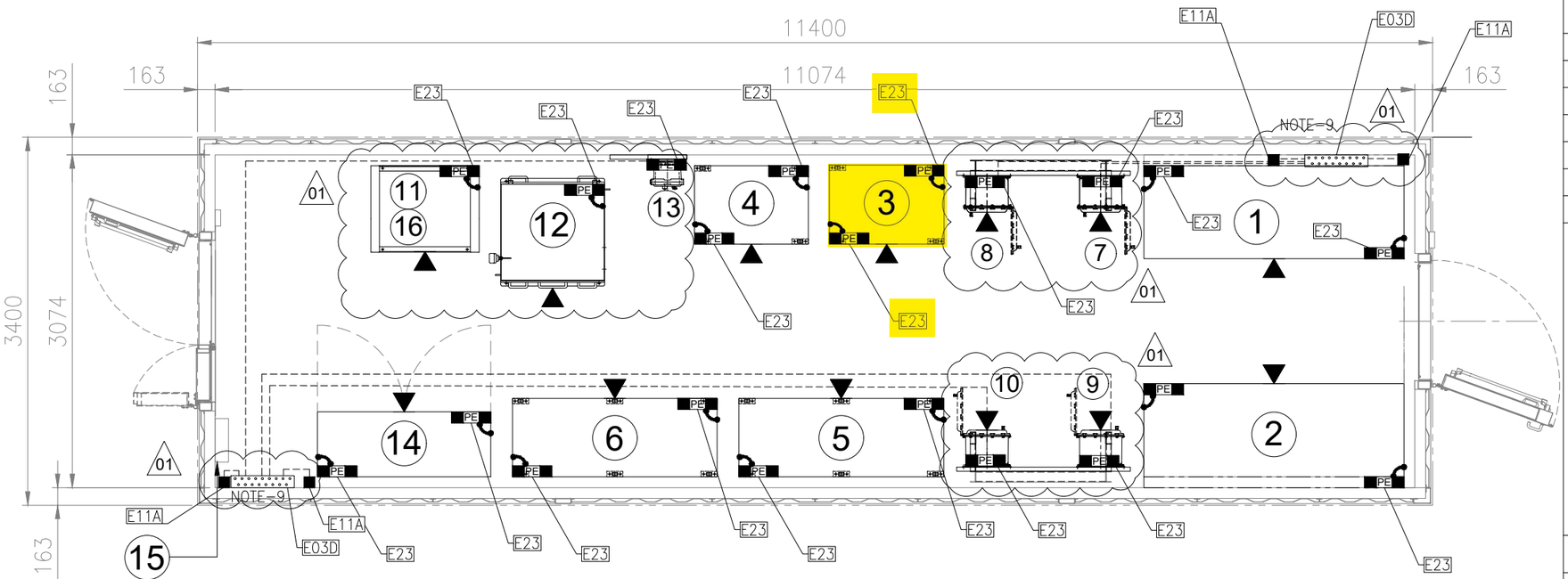
File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg



EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	UP-200F3	AC UPS 35kVA
2	UP-200F4	AC UPS 15kVA
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA
11	NC-200F2_BC-200F2A/B	NAVAID PANEL
12	BA-200F2	BATTERY BOX NAVAID
13	CB-200F2	ISOLATOR BOX NAVAID
14	B300-HSB-001	DISTRIBUTION & HVAC PANEL – AC/UPS ROOM
15	–	EYE WASH STATION
16	BC-200F2	BATTERY CHARGER NAVAID

NOTES

1. THIS DOUCMENT IS VALID ONLY FOR EARTHING LAYOUT.
2. THE CABLE SIZE SHALL BE CONFIRMED.
3. THE EXACT POSITION OF EARTHING/MARSHALLING BUS BAR SHALL BE DEFINED BY VENDOR.
4. THE EARTHING BUS BAR INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5. FOR TYPICAL DETAILS PLEASE REFER DOCUMENT "123A90-DDL-EL-DD-20090-ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM".
6. DUE TO THE TOP CABLE ENTRIES THE EARTHING BUS BAR INSIDE THE CABINETS SHALL BE INSTALLED AT THE TOP OF THE CABINETS THEMSELVES.
7. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER DOCUMENT 123A90-DDL-EL-RE-20154.
8. ALL THE NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE SOUTH-WEST CORNER AT AN ELEVATION OF 2.5M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.5M.



EARTHING LAYOUT

"B-300" UPSs & BATTERIES SWITCHROOM

PLAN

EL.+ 23.310 T.O.S.

SYMBOL	DESCRIPTION
PE	EARTHING BUS
	EARTHING BAR TINNED COPPER WITH no.18 HOLES
--------	35sq.mm Y/G INSULATED COPPER CONDUCTOR FOR PE
PE	PROTECTIVE EARTH
■	EARTHING BOSS AISI316L
	JUMPER CONNECTION
▲ 01	FRONT OF EQUIPMENT

REFERENCE	
DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT-UPSs & BATTERIES SWITCHROOM
1724000049-AR-DD-00020	B-300 DETAILED DRAWINGS – E&I SHELTERS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20138**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/05/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT – UPSs & BATTERIES SWITCHROOM
"B-300" UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:50

A3 | DRAWING NO. 123A90-DDL-EL-DL-20138 | SHEET 003 | REV. 01

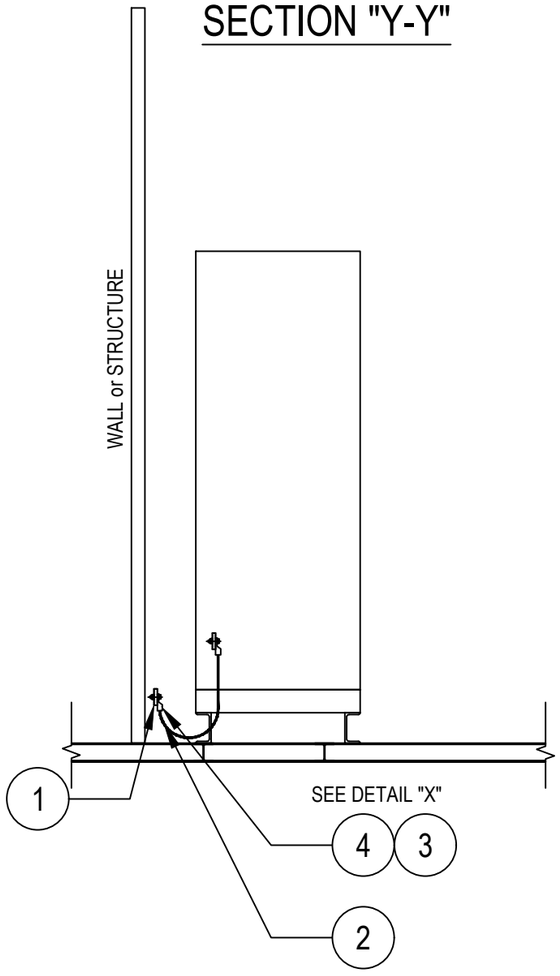
F.to UNI A3: 420mmx297mm

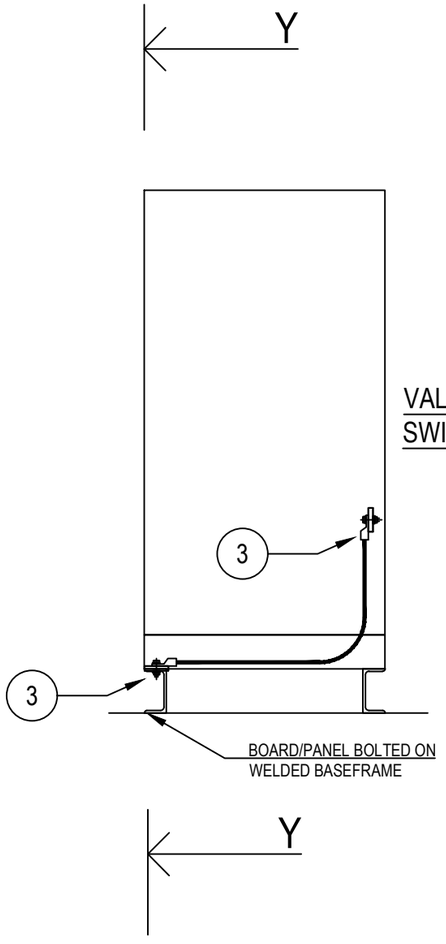
File Name : 123A90-DDL-EL-DL-20138 Rev. 01

E23

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	MARSHALLING EARTHING BAR	TINNED COPPER	50X5		NOTE 1
2	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm² SEE NOTE 1		NOTE 1
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm² SEE NOTE 1	4	NOTE 1
4	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	4	

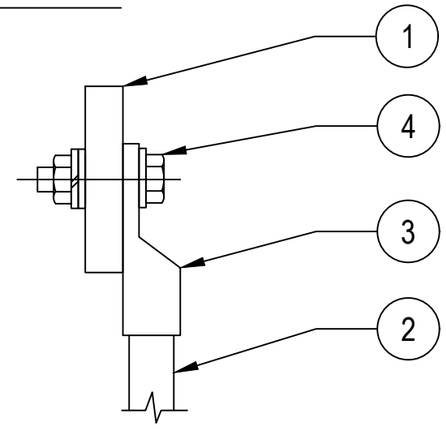
SECTION "Y-Y"





VALID FOR HV/LV SWITCHGEAR

DETAIL "X"



NOTES:

1) FOR SIZE OF THE EARTHING CABLE SEE ALSO EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_G	25/10/24	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 PANELS/BOARDS IN TECHNICAL ROOM

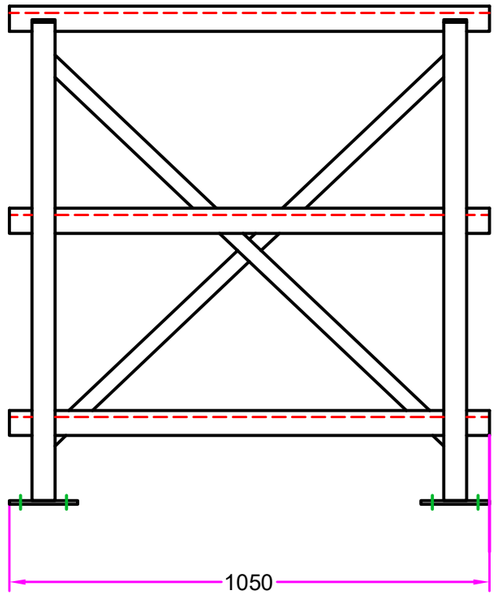
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

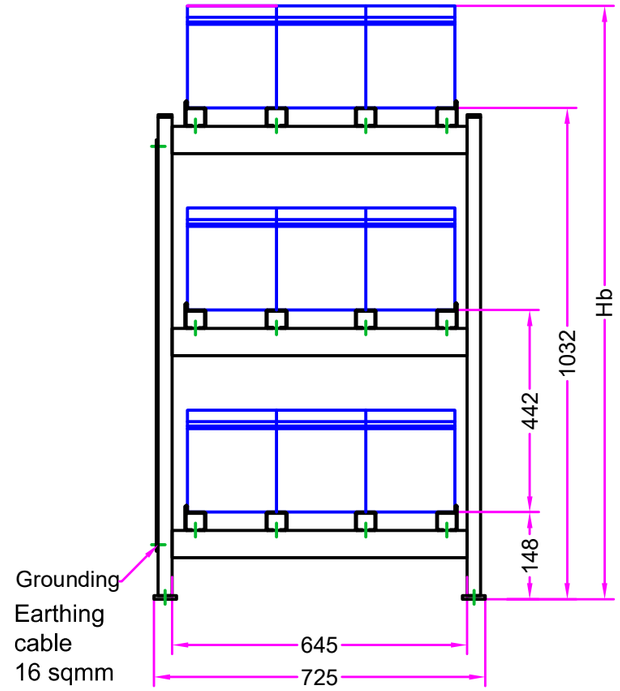
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F.to UNI A3: 420mmx297mm

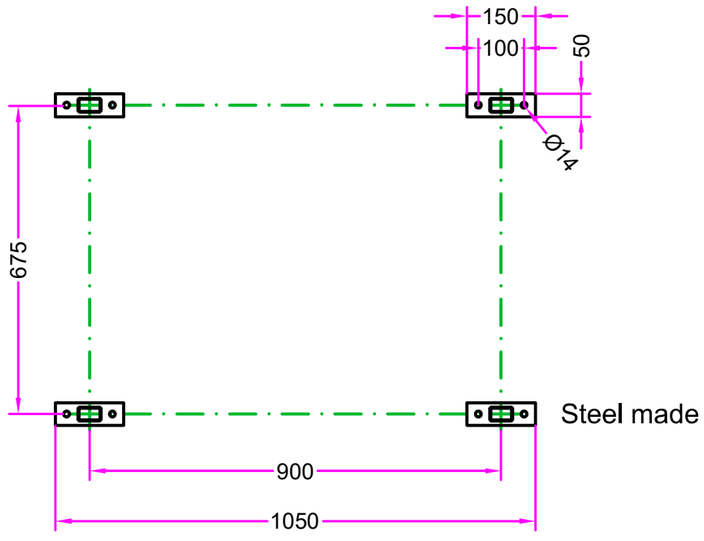
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Battery Rack
BA-200F3 A/B





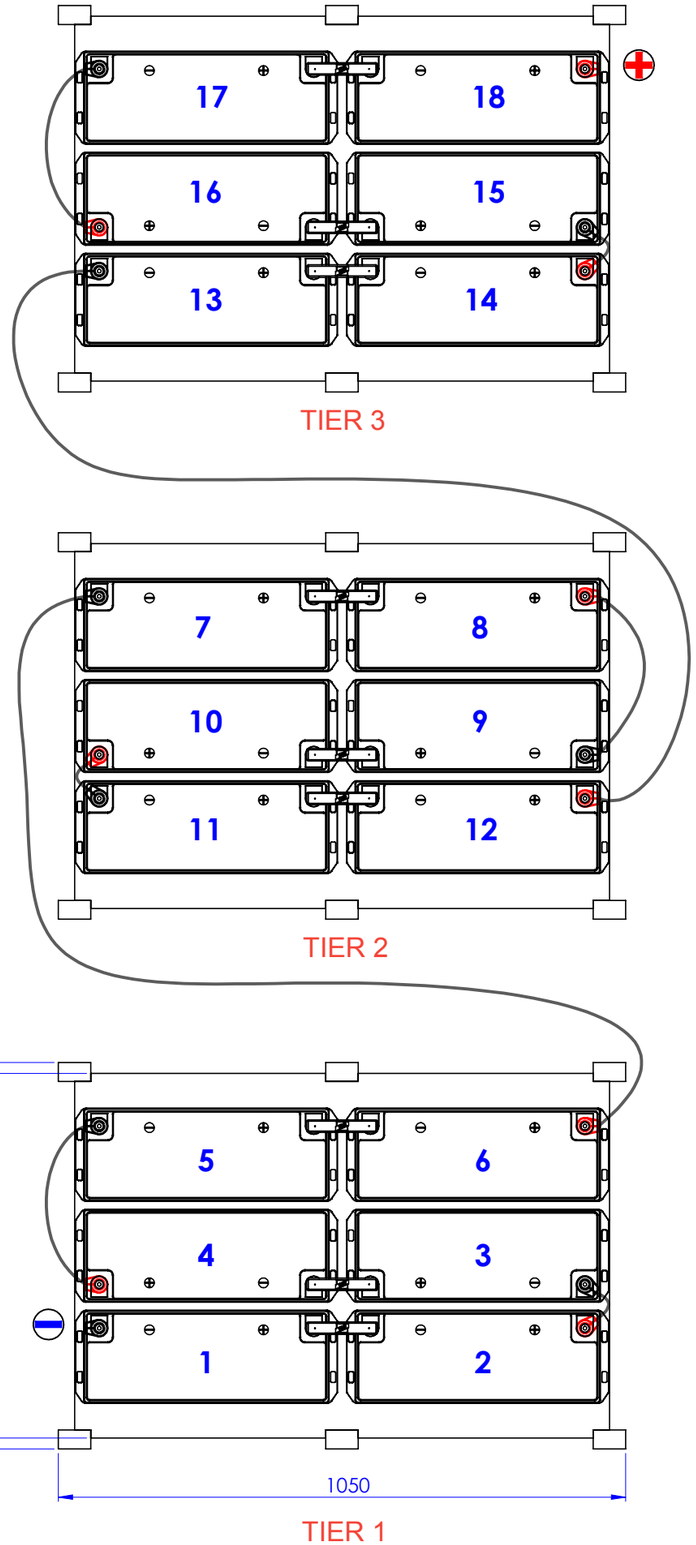
Foot-Print:



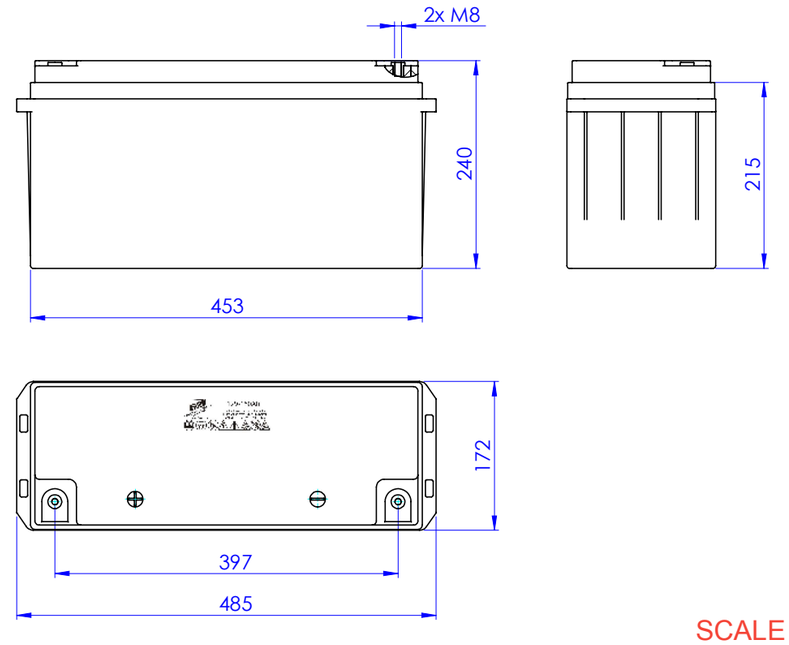
Rack weight : 54,7 kg
Battery weight : 855,0 kg
Total weight : 909,7 kg

Material:	S235 JR EN 10025 (St-37-2)		Date	Name	Checked	Execution: Rack, Standard	Drawing-/Article No: 3L3115	Rev: 00
Coating:	Plastic Coated		16/24	Riedel	St.Selig	Type: 3E-PGL 3-17 with FIX002		
Tolerance:	DIN ISO 2768 "C"		Scale: none			Production Details:	Welding execution according to	
Battery:								

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BATTERY BLOCK : FLG12-150



SCALE 1:5

BILL OF MATERIALS	CODE	WEIGHT (kg)	Q.TY
CELL FLG 12-150	11000495	47,50	18
COPPER TIN STRIP FLL-FHP serie	41000222	0,04	9
CONNECTION AND AGM COVER CENTER DISTANCE 100	41000251	0,01	9
CELLS CONNECTION CABLE 50 mm	21000191	0,5	7 m
CABLE LUG F8 X 50	41005167	0,3	18
CABLE LUG COVER BLACK 50040	41000243	0,008	9
CABLE LUG COVER RED 50039	41000244	0,008	9

REV./REV.:	DATA/DATE:	PROGETTISTA/DESIGNER:	DISEGNATO/DRAWN:	APPROVATO/APPROVED:	DESCRIZIONE MODIFICHE/DESCRIPTION REVISIONS:
TOLLERANZE GENERALI/GENERAL ALLOWANCES: NORMA UNI EN 22768-mk		CARATTERISTICHE ELETTRICHE/ELETTRIC CHARACTERISTICS:	PESO BATT./BTR. WEIGHT: 855.42 kg		PROGETTISTA/DESIGNER: P. VECCHIARELLI
FINITURA SUPERFICIALE/SURFACE FINISHING: NORMA UNI ISO 1302		TIPO ELEMENTO/CELL TYPE: 18 FLG12-150	PESO EL./CELL WEIGHT: 47.50 kg		DISEGNATO/DRAWN: P. VECCHIARELLI
FORME E POSIZIONE/FORMS AND POSITION: NORMA UNI ISO 1101					APPROVATO/APPROVED: F. PAGLIARINI
SCALA/SCALE: 1:8	PROIEZIONE/PROJECTION:	FOGLIO/SHEET: A2	CODICE SAP EL./CELL SAP CODE: 11000495		DATA/DATE: 10/04/2024
DESCRIZIONE/DESCRIPTION:				FILE-DISEGNO/FILE-DRAWING: layout 18 x FLG 12-150	REV./SAP.: 1

FAAM

1724000372-EL-DG-00011

AC UPS 35kVA - 18 x FLG 12-150

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CAE EPLAN Electric P8

AUXILIARY
From Lighting & Small Power DB BOP DP-200N1
(Cubicle 03-Q41)
100-240V/N/PE~50/60Hz
back-up fuse gG10A 3G2.5mm2

LINE A
From LV Switchgear SG-200N1
(Cubicle A3/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

From LV Switchgear SG-200N1
(Cubicle A7/02)
Bypass mains 400V;3/PE~50Hz
gG63A 4G35mm2

LINE B
From LV Switchgear SG-200N1
(Cubicle A4/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

Not included in the AEG shipment

Code	Description
Q1	Rectifier input mains breaker
T40	Rectifier input isolation transformer
A1	Rectifier
A2	Inverter
T1	Inverter output isolation transformer
A3-A4	Static by-pass switch
A18	Display control module
A85	Heater
H1	Light

+MBC1
BY-200F3
Bypass transformer cabinet 40 kVA
1000007888.020
10009757

-Q10 L=80/65A I=0,8kA Icu=50kA
-T8 400V/400V 40kVA
-Q28.1 NC
-Q28.2 NC

+UPS1
BC-200F3A
Protect 8.33 40-400-210-400
1000007888.010
10009756

+UPS2
BC-200F3B
Protect 8.33 40-400-210-400
1000007888.010
10009756

-Q1 L=100/85A I=1,0kA Icu=50kA
-T40
-A1 REC
-A2 INV
-T1
-F1,-F2,-F3
-A3 SBS
-A4
-A18 Display
-A20 Parallel Adapter
INV CAN -X3 1-3 → 203 / 1.6
INV Sync -X5 1-4 → 205 / 1.6
-L11,-L12,-L13 Parallel preventive choke coil
-A24.1 BLÜ-PRO
-F91
-A12 ,-A13 Remote signaling

-Q71 NC
-Q72 NC
-Q29 1 INV operation 2 Manual bypass
-F25

DP-200F3
-QF31 B32A 300mA
-QF32 B32A ^^0mA
-QF33 B32A 300mA
-QF34 B16A 300mA
5pc
-QF38 B16A 300mA
-QF39 B10A 300mA
4pc
-QF42 B10A 300mA
-QF43 B10A
8pc
-QF50 B10A
-QF51 B6A
-QF52 B6A

Not included in the AEG shipment
max. gG16A
max. gG16A
Load
400/230V;3/N/PE~50Hz

+BFB1
CB-200F3A
Battery fuse box 200 A
-Q2 L=200A
DC 24V max. 300W
2(1x70 mm2)

+BFB2
CB-200F3B
Battery fuse box 200 A
-Q2 L=200A
DC 24V max. 300W
2(1x70 mm2)

+BAT1
BA-200F3A
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

+BAT2
BA-200F3B
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors) attached.
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

*2 Connection cables are not included.

					Date	14.05.2024
01	500900000053	13.08.2024	Bedoschäfer	Editor	EDC	
02	500900007089	27.08.2024	Bedoschäfer	Checked	Ch.Peck.	
Stat	Alteration	Date	Name	Norm		

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

System 40 kVA
Single-line diagram

1000007888_010 en

& FFA

A0 sheet 1 sheets

1000007888_010

S-701D Data Sheet for
AC Uninterruptible Power Systems (UPS) (IEC 62040-3)

JIP33 JOINT INDUSTRY PROGRAMME

Row							Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
5		**GENERAL**					
6	5.1.2	Vendor :	Input Data	AEG Power Solutions			
7	5.1.2	Order status :	for purchase	Noted			
8	5.1.2	Purchase order number, date :	1724000372 123A90A rev1 dated 22/4/2024	Noted			
9	5.1.2	Manufacturer :	Input Data	AEG Power Solutions			
10	5.1.2	Model number :	Input Data	2 x Protect 8.33 S10 40kVA			
11	5.1.2	Serial number :	Input Data	Released after production			
12	5.2.3	Application :	industrial	Noted			
13	5.3.3	Purchaser specified rated output power :	35	40kVA	kVA		
14	5.1.1	Quantity :	1	Confirmed. Redundant system			
15		Conformity assessment system (CAS) level :	D	Noted			
16		**CONFIGURATION**					
17	5.1.1, A.1, Figure A.2, Figure A.3A, Figure A.3B, Figure A.6	UPS configuration :	simplified parallel UPS with common bypass & common output-Figure A.3A	Confirmed			
18	5.1.1, B.1	UPS topology :	double conversion	Confirmed			
19	5.1.1	Static switch configuration :	in both inverter and bypass path	Confirmed			
20	5.4.2.3	Battery configuration :	2 x 50%	Confirmed. 15 min. autonomy each battery			
21	5.3.2, 5.3.4	Performance classification :	manufacturer to advise	-			
22	8.1.1.3	Bi-directional rectifier :	No	Not applicable			
23	8.4.2.11	Remote access required :	Yes (read only)	Confirmed. Modbus TCP			
24	8.4.2.11	Hardware (adapters, connectors, cables, etc.) required for remote access :	manufacturer to advise	Confirmed			
25	8.1.1.5, 8.1.1.6	On-line battery monitoring facility required :	string monitoring	Confirmed			
26	8.1.1.4	On-line battery testing feature required :	No	Noted			
27	8.1.1.4	Battery test load interface :	No	Noted			
28	5.4.2.3	DC earth leakage monitoring required :	No	Noted			
29	7.4.14	Single line diagram and status display :	on HMI	LCD display with synoptic			
30	8.1.2.11	Black start feature required :	Yes	Confirmed			
31	8.1.1.1	Earth screen required for isolation transformer :	manufacturer to advise	Confirmed on the by-pass isolation transformer			
32		**PHYSICAL ASPECTS**					
33	7.2.1	Mounting :	floor mounting	Confirmed			
34	7.2.1	Overall cabinet dimensions - length :	manufacturer to advise	900 + 600 + 900 mm	mm		
35	7.2.1	Overall cabinet dimensions - depth :	manufacturer to advise	860 mm	mm		
36	7.2.1	Overall cabinet dimensions - height :	manufacturer to advise	1915 mm	mm		
37	7.2.1	Reference outline drawing number :	Input Data	1724000372-EL-DA-00004			
38	7.2.1	Total UPS cabinet mass :	manufacturer to advise	2258 kg	kg		
39	7.2.1	Total UPS mass with batteries (if integrated) :	manufacturer to advise	Batteries not integrated	kg		
40	7.2.4, 7.2.5	Cable entry location :	top	Confirmed. Through by-pass cabinet by means of cable glands			
41	7.2.4, 7.2.5	Cable entry type :	removable - undrilled plate	Confirmed			
42	7.2.4, 7.2.5	Gland plate material :	manufacturer standard	Steel			
43	7.2.1	Paint colour :	supplier standard	RAL7035			
44	7.2.1	Canopy for cabinet required :	No	Noted			
45	7.3.9	Document holder :	Yes	Confirmed			
46		**INSTALLATION**					
47	4,1	Site :	offshore - fixed	Noted. Painting class C3-H			
48	4,1	Location of UPS cabinet installation :	indoor	Noted			
49	7.3.1, 7.3.2	Front access clearance dimensions for operation and maintenance :	800	Noted	mm		
50	7.3.2	Side clearance for ventilation (if required) :	manufacturer to advise	0	mm		
51	7.3.2	Rear clearance for ventilation (if required) :	manufacturer to advise	100 mm	mm		
52	7.2.3, 7.9.3	Installed location of battery :	inside UPS room	Battery housed on rack			
53	7.2.3	Maximum battery assembly dimensions (L x D x H):	manufacturer to advise	Battery rack 1050 x 725 x 1032	mm		
54		**SAFETY**					
55	5.1.1	Accessibility :	operator access area	Front access			
56	5.1.1	Key required for cabinet :	Yes	Confirmed			
57	7.2.2	Degree of protection (with closed doors) :	IP31	IP43			
58	7.2.2	Degree of protection (with open doors) :	IP2X	Confirmed			
59	7.7.5	Cooling fan replacement while UPS in service :	No	Noted			
60	5.1.2	Local language for caution/danger/warning labels :	English	Confirmed			
61		**ELECTROMAGNETIC COMPATIBLITY**					
62	5.1.4	Emission :	UPS Cat C3	Confirmed			
63	5.1.4	Immunity :	UPS Cat C3	Confirmed			
64		**ENVIRONMENTAL CONDITIONS**					
65	4.2.1.1	Minimum ambient temperature (operation) :	-8,4	Confirmed with heater option included	°C		
66	4.2.1.1	Maximum ambient temperature (operation) :	40	Confirmed	°C		
67	4.2.1.1	Maximum relative humidity (operation) :	95	Confirmed. Not condensing	%		
68	4.2.1.1	Temperature at which relative humidity is specified (operation) :	Input Data	-	°C		
69	4.2.1.2	Maximum altitude (operation) :	Sea level	Noted	m		
70	4.2.2.1	Minimum ambient temperature (storage and transportation) :	-5	Noted	°C		
71	4.2.2.1	Maximum ambient temperature (storage and transportation) :	40	Noted	°C		
72	4.2.2.1	Maximum relative humidity (storage and transportation) :	95	Noted	%		
73	4.2.2.1	Temperature at which relative humidity is specified (storage and transportation) :	Input Data	-	°C		
74	4.3.2	Seismic requirement data :	Zone 2	Noted			
75	4.2.2.1	Storage site of UPS :	indoor – natural ventilation	Noted			
76	4.3.2	Additional or unusual conditions (operation) :	Input Data	Not applicable			
77	4.3.3	Additional or unusual conditions (storage and transportation) :	Input Data	Not applicable			
78	5.1.5	Acoustic noise at 1 m - normal mode :	70	< 65 dB(A)	dBA		
79	5.1.5	Acoustic noise at 1 m - stored energy mode :	70	< 65 dB(A)	dBA		
80		**COMMUNICATION INTERFACE(S)**					
81	5,6	(1) Interface media for SCADA (ICSS / DCS) :	serial	Modbus TCP + relays			
82	5,6	(1) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
83	5,6	(1) Interface protocol for SCADA (ICSS / DCS) :	Modbus	Modbus TCP + relays			
84	5,6	(2) Interface media for electrical management / control system :	serial	Modbus TCP + relays			
85	5,6	(2) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
86	5,6	(2) Interface protocol for electrical management / control system :	Modbus	Modbus TCP + relays			
87	5,6	(3) Remote access / monitoring software required:	Yes	Noted			
88	5,6	(3) Interface media for remote access / monitoring:	ethernet (fiber)	Noted			
89	5,6	(3) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
90	5,6	(3) Interface protocol for remote access / monitoring :	Modbus	Modbus TCP + relays			
91		**AC INPUT SPECIFICATIONS**					
92	5.2.1	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
93	5.2.1	Voltage (steady state, R.M.S) - tolerance :	+/- 10	Confirmed	%		
94	5.2.1	Frequency - rated :	50 Hz	Confirmed			
95	5.2.1	Frequency - tolerance :	+/- 2	Confirmed	%		
96	5.2.2	Phases required :	3	3			
97	5.2.2	Neutral required :	Yes	Confirmed. Neutral not required for the rectifier supply			
98	5.2.2	Current (R.M.S) - rated (with the energy storage device charged) :	manufacturer to advise	71,2A	A		
99	5.2.2	Power factor :	manufacturer to advise	Data not characterized by the factory. Measurable on request			
100	5.2.2	In-rush (% of rated current) :	manufacturer to advise	Typically 10 x In	%		
101	5.2.2	In-rush (time) :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
102	5.2.2	Maximum current (with low input volt and energy storage device charging) :	manufacturer to advise	92A at 400Vac	A		
103	5.2.2	Time for overload (125 % of rated current) :	10	Confirmed	min		
104	5.2.2	Time for overload (150 % of rated current) :	1	Confirmed	min		
105	5.2.2	Total harmonic distortion - current (THD p.u.) :	8	Confirmed. The AC UPS works with an input voltage harmonic distortion ≤ 8%	%		
106	5.2.3	Short circuit current of the input supply (Minimum and Maximum) :	50	Confirmed. The charger is equipped with an input MCCB (Q1) with Isc = 50kA	kA		
107	5.2.2	Minimum short circuit current :	Input Data	Data not characterized by the factory. Measurable on request	kA		
108	5.2.2	Earth leakage current :	Input Data	Data not characterized by the factory. Measurable on request	mA		
109	5.2.2	AC power distribution system - compatibility :	TN-S	Confirmed			
110	5.2.3	Additional or unusual conditions :	Input Data	Not applicable			
111	5.2.3, 7.5.4	Cable size (cross-section area) - input mains :	Input Data	min 50 sqmm - max 2x95 sqmm	sq.mm.		
112	5.2.3, 7.5.4	Cable size (cross-section area) - input bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
113	5.2.3, 7.5.4	Cable size (cross-section area) - input maintenance bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
114	7.4.8, 8.1.1.1	Input isolation transformer required :	Yes	Confirmed			
115	7.4.10	Input isolation transformer winding :	supplier standard	Aluminium			
116		**DC AND BATTERY SPECIFICATIONS**					
117	5.4.2.2	DC voltage level :	220	Confirmed	V d.c.		
118	5.4.2.2	Design life :	5	> 12 years	years		
119	5.4.2.2	Float service life :	manufacturer to advise	Dependent from temperature	years		
120	5.4.2.2	Shelf life of battery :	manufacturer to advise	3 months	months		
121	5.4.2.2	Quantity of cells and strings :	manufacturer to advise	18 blocks - 1 string	nos.		
122	5.4.2.2	Nominal voltage (total) :	manufacturer to advise	216V	V d.c.		
123	5.4.2.2	Battery technology :	sealed nickel cadmium	Lead-Acid VRLA GEL			
124	5.4.2.2	Nominal AH capacity :	manufacturer to advise	150Ah	AH		
125	5.4.2.2	Discharge rate (C-rate) :	Select	C20			
126	5.4.2.2	Electrolyte fill status :	manufacturer standard	Not applicable			
127	8.1.2.3	Purchaser's requirement (% of battery recharge level - 1) :	80	Confirmed with charging current limited to 0,1C	%		
128	8.1.2.3	Purchaser's requirement (time for battery recharge level - 1) :	10	Confirmed	Hours		
129	8.1.2.3	Purchaser's requirement (% of battery recharge level - 2) :	100	Data not characterized by the factory. Measurable on request	%		
130	8.1.2.3	Purchaser's requirement (time for battery recharge level - 2) :	24	Data not characterized by the factory. Measurable on request	Hours		
131	5.4.2.2	Stored energy time (Autonomy time at 100% rated load) :	30	Confirmed with both batteries	min		
132	5.4.2.2	Restored energy time (recharge time to 80% capacity):	manufacturer to advise	10h	hours		
133	5.4.2.2	Ambient reference temperature :	40	Confirmed	°C		
134	5.4.2.2	Earth condition/isolation :	manufacturer to advise	floating			
135	5.4.2.2	Ripple current (R.M.S) :	manufacturer to advise	< 2% RMS	%		
136	5.4.2.2	Nominal discharge current (stored energy mode):	manufacturer to advise	-	A		
137	5.4.2.2	DC Fault current rating :	manufacturer to advise	Data not characterized by the factory. Measurable on request	A d.c.		
138	5.4.2.2	Cable volt drop recommendation (≤ % at nominal discharge current) :	manufacturer to advise	2%	%		
139	5.4.2.2	Charging regime :	manufacturer to advise	Constant voltage, current limited			
140	5.4.2.2	Charge voltage (float) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
141	5.4.2.2	Charge voltage (boost) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
142	5.4.2.2	Charge voltage (equalising) and tolerance band :	manufacturer to advise	Not applicable to VRLA batteries	V d.c.		
143	5.4.2.2	Minimum end of discharge voltage :	manufacturer to advise	178,2V	V d.c.		
144	5.4.2.2	Charge current limit (or range) :	limitation of batteries charging to 30% of the UPS sizing	15A (0,1C)	A d.c.		
145	5.4.2.2	Temperature compensated charging required:	Yes	Confirmed			
146	5.4.2.3	Battery isolation box required :	Yes	Confirmed			
147	5.4.2.3	Additional or unusual conditions :	Input Data	Not applicable			
148	5.4.2.3	Load profile for battery design, attached :	No	Noted			
150		**BATTERY ROOM**					
151	4.2.1.1	Minimum ambient reference temperature :	-8,4	-8,4°C (used for battery sizing)	°C		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
152	4.2.1.1	Maximum ambient reference temperature :	40	+40°C (used for battery sizing)	°C		
153	5.4.2.1	Area classification :	safe	Noted			
154	5.4.2.1	Hazardous area classification :	Zone 2	Noted			
155	5.4.2.1	Minimum gas subdivision and temperature class (for equipment in battery room) :	Select	-			
156	8.1.2.10	Temperature sensor (for VRLA / partial gas recombination batteries) :	Yes	Confirmed. Standard sensor			
157		**BATTERY ISOLATOR BOX SPECIFICATIONS**					
158	7.9.1	Enclosure material :	manufacturer standard	Aluminium alloy			
159	7.9.1	Mounting :	Select	Wall mounting			
160	7.9.1	Breathing valve required :	manufacturer to advise	No			
161	7.9.1	Internal earth bar :	tinned copper	-			
162	7.9.3	Minimum design temperature :	-8,4	Noted	°C		
163	7.9.3	Maximum design temperature :	40	Noted	°C		
164	7.9.3	Maximum relative humidity :	95	Noted	%		
165	7.9.3	Temperature at which relative humidity is specified:	Input Data	-	°C		
166	7.9.4	Degree of protection :	IP 31	IP65			
167	7.9.5	Area classification :	safe	Noted			
168	7.9.5	Hazardous area certification required :	none	-			
169	7.9.5	Hazardous area classification :	N/A	Not applicable			
170	7.9.5	Hazardous area level of protection :	N/A	Not applicable			
171	7.9.6	Cable entry :	top	Bottom with cable glands			
172	7.9.6	Cable indirect entry via 'ex e' enclosure :	No	Not applicable			
173	7.9.6	Battery cable size (cross-section area) :	Input Data	70 sqmm armored cable class-2	sq.mm.		
174	7.9.6	Cable entry diameter in battery box (ISO metric) :	Input Data	22,6 mm			
175	7.9.7	Battery isolator type :	MCCB	Confirmed			
176	7.9.8	Rated current of breaker / switch fuse unit :	manufacturer to advise	200A	A		
177	7.9.8	Rated breaking current (Icu) - (if breaker used) :	manufacturer to advise	36kA	kA		
178	7.9.10	Breaker status potential free contact (NO) :	two	Confirmed			
179	7.9.9	Under voltage trip feature required :	Yes	Confirmed			
180	7.9.9	Under voltage trip coil for :	black start reserve	Confirmed			
181	8.1.2.12	ESD trip required :	Yes - via shunt trip	Yes - through SIL relay			
182	8.1.2.12	ESD override key switch :	key captive in overridden position and with status contact	Confirmed			
183	7.9.9	Over voltage trip required :	Yes	Not applicable			
184		**AC OUTPUT SPECIFICATIONS**					
185	5.3.2	Rated output power (apparent) :	35	40kVA	kVA		
186	5.3.2	Rated output power (active) :	28	32kW	kW		
187	5.3.2	AC power distribution system - compatibility :	TN-S	Noted			
188	5.3.2	Phases available :	3	Confirmed			
189	5.3.2	Neutral available :	Yes	Confirmed			
190	5.3.2	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
191	5.3.2	Voltage - normal mode variation :	manufacturer to advise	+/- 1%	%		
192	5.3.2	Voltage - storage energy mode variation :	manufacturer to advise	+/- 1%	%		
193	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - linear :	5	< 3%	%		
194	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - non linear :	5	Confirmed	%		
195	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - linear :	5	< 3%	%		
196	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - non linear :	5	Confirmed	%		
197	5.3.2	% Voltage unbalance, 100% load unbalance :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
198	5.3.2	Phase angle displacement, 100% load unbalance:	manufacturer to advise	Data not characterized by the factory. Measurable on request	°		
199	5.3.2	% Voltage transient, 100% step load - linear :	manufacturer to advise	+/- 2%	%		
200	5.3.2	Voltage transient recovery time, 100% step load - linear :	manufacturer to advise	2 ms	s		
201	5.3.2	% Voltage transient, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
202	5.3.2	Voltage transient recovery time, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
203	5.3.2	% Voltage transient, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
204	5.3.2	Voltage transient recovery time, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
205	5.3.2	% Voltage transient, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
206	5.3.2	Voltage transient recovery time, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
207	5.3.2	Frequency (steady state) - rated :	50	Confirmed	Hz		
208	5.3.2	Frequency (steady state) - normal mode variation:	2	+/- 0,1%	%		
209	5.3.2	Frequency (steady state) - storage energy mode variation :	2	+/- 0,1%	%		
210	5.3.2	Frequency (steady state) - free running variation:	2	+/- 0,1%	%		
211	5.3.2	Synchronization (maximum ± % range of rated frequency) :	manufacturer to advise	-	%		
212	5.3.2	Maximum synchronism phase error (referred to 360° cycle) :	manufacturer to advise	-	%		
213	5.3.2	Maximum slew rate :	manufacturer to advise	-	Hz/s		
214	5.3.2	Current (R.M.S) - rated :	manufacturer to advise	58A	A		
215	5.1.8.1, 5.3.2	Current (R.M.S) - overload capability (% of rated current for ten minutes) :	manufacturer to advise	125%	%		
216	5.1.8.2, 5.3.2	Current (R.M.S) - overload capability (% of rated current for one minute) :	manufacturer to advise	150%	%		
217	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (% of rated current) :	manufacturer to advise	3,68 x In (1ph) - 2,02 x In (3ph)	%		
218	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (time duration) :	manufacturer to advise	500 ms	s		
219	5.3.2	Current (R.M.S) - limitation (% of rated current) :	manufacturer to advise	-	%		
220	5.3.2	Current (R.M.S) - limitation (time duration) :	manufacturer to advise	-	s		

Row	S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)						Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
221	5.3.2	Current (R.M.S) - fault clearing capability (normal mode) :	manufacturer to advise	-	A		
222	5.3.2	Current (R.M.S) - fault clearing capability (stored energy mode) :	manufacturer to advise	-	A		
223	5.3.2	Load power factor - rated :	manufacturer to advise	0,8			
224	5.3.2	Load power factor - displacement (permissible limit lead) :	manufacturer to advise	Cap - 1 - Ind			
225	5.3.2	Load power factor - displacement (permissible limit lag) :	manufacturer to advise	Cap - 1 - Ind			
226	5.3.2	Efficiency in normal mode - 100% load :	manufacturer to advise	86,4%	%		
227	5.3.2	Efficiency in normal mode - 75% load :	manufacturer to advise	87,3%	%		
228	5.3.2	Efficiency in normal mode - 50% load :	manufacturer to advise	87,2%	%		
229	5.3.2	Efficiency in normal mode - 25% load :	manufacturer to advise	83,8%	%		
230	7.4.8	Output isolation transformer required :	No	Yes. Output transformer is included in AEG standard design			
231	7.4.10	Output isolation transformer winding :	Select	Aluminium			
232	7.6.5	AC output neutral earth link :	earthed	Noted. Externally			
233	7.1.6	Reference document to AC output distribution board :	To see Electrical Load List	Noted			
234	5.3.3	Integrated AC output distribution board with MCBs:	Yes	Confirmed			
235	5.3.3	Cable size (cross-section area) - output:	manufacturer to advise	min 16 sqmm - max 2x95 sqmm	sq.mm.		
236		**BYPASS SPECIFICATIONS**					
237	C.3	Bypass transfer time :	manufacturer to advise	0	msec		
238	C.3	Bypass static switch rated current :	manufacturer to advise	40kVA - 58A	A		
239	C.3	Bypass protection fuse or circuit breaker rating :	manufacturer to advise	MCCB 65A	A		
240	7.4.8	Bypass transformer required :	Yes	Confirmed			
241	7.4.10	Bypass transformer winding :	copper or aluminum	Aluminium			
242	7.3.5	Maintenance bypass and bypass transformer location:	integrated	Manual by-pass integrated			
243	8.3.6, C.5	Overall maintenance bypass :	internal	Q29 manual by-pass integrated			

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	BA-200F3B	: Battery Rack GEL VRLA-7Y for AC UPS 35 kVA		Dwg	123A90-DDL-EL-DS-20032	
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)		Module	LD_B-300	
TASK	code	C10000849	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX17	Battery

1	Check battery is installed in accordance with manufacturer's instructions with sufficient clearance and accessibility for maintenance.	OK
2	Check battery cells are identified and tagged correctly.	PL
3	Check battery data against data sheet /project specification.	OK
4	Check all nuts and links are fitted, tightened and greased.	OK
5	Check caps for transportation have been removed.	NA
6	Check terminals protecting caps are installed.	OK
7	Check cells interconnections against drawings.	OK
8	Check cable connections.	OK
9	Check all electrolyte levels are correct (if applicable).	NA
10	Check special tools and safety equipment are available (if any).	NA
11	If required produce Red Line Mark Up for "AS BUILT"	

Battery data

Manufacturer :	FAAM	Serial N° :	NA	Battery Type :	FLG 12-150
N° of cells :	18	Cell voltage :	12 V d.c.	Battery charger :	10 h
Battery capacity :	150 AH	Battery voltage	216 V d.c.	Ambient temp.	20°C

TESTING AND MEASUREMENT INSTRUMENT USED

Type	Serial n°	Calibration certificate	Validity
TORQUE WRENCH 4-20Nm	118751936231191561	278623	02.10.2024

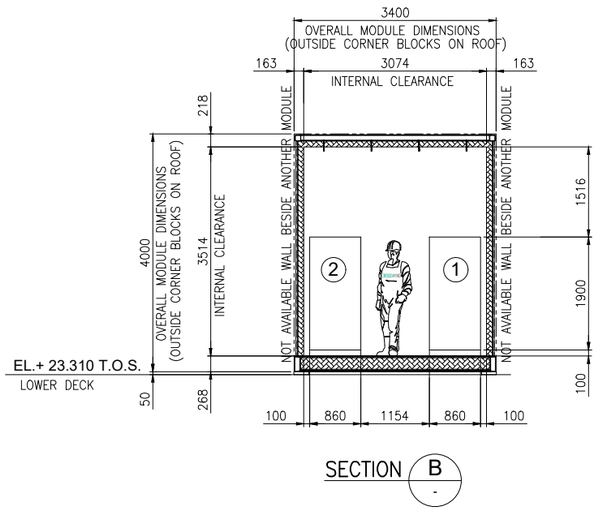
Cell number	1	2	3	4	5	6	7	8	9	10	11	12
Connection tightening	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm
Electrolyte level	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cell number	13	14	15	16	17	18	19	20	21	22	23	24
Connection tightening	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm	12 Nm						
Electrolyte level	NA	NA	NA	NA	NA	NA						
Cell number	25	26	27	28	29	30	31	32	33	34	35	36
Connection tightening												
Electrolyte level												
Cell number	37	38	39	40	41	42	43	44	45	46	47	48
Connection tightening												
Electrolyte level												

Comments:

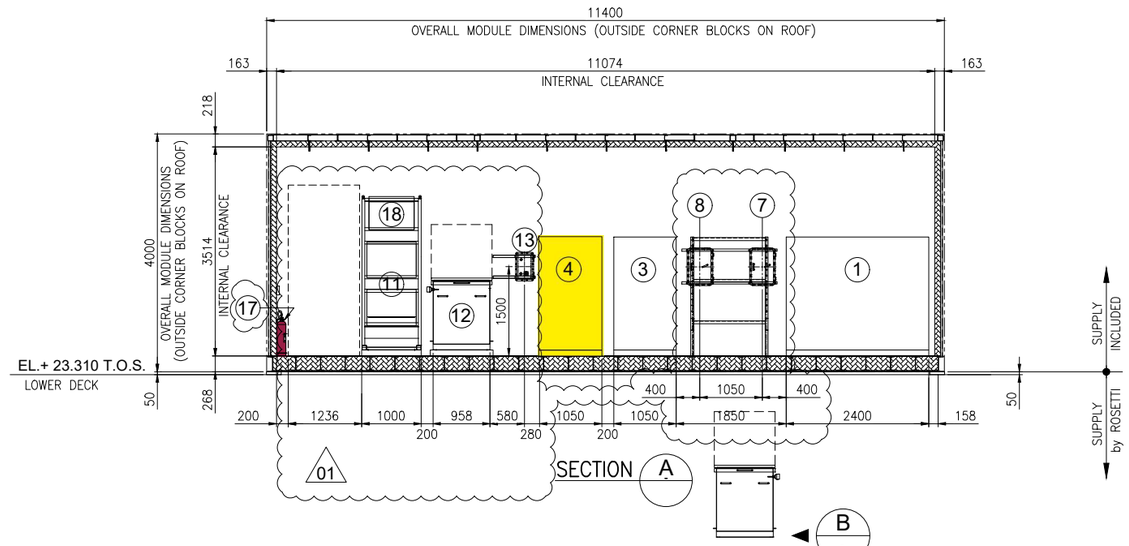
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-29T16:02:02.730Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:49:22.671Z	

DRAWING NO. 123A90-DDL-EL-DL-20106

REV. 01



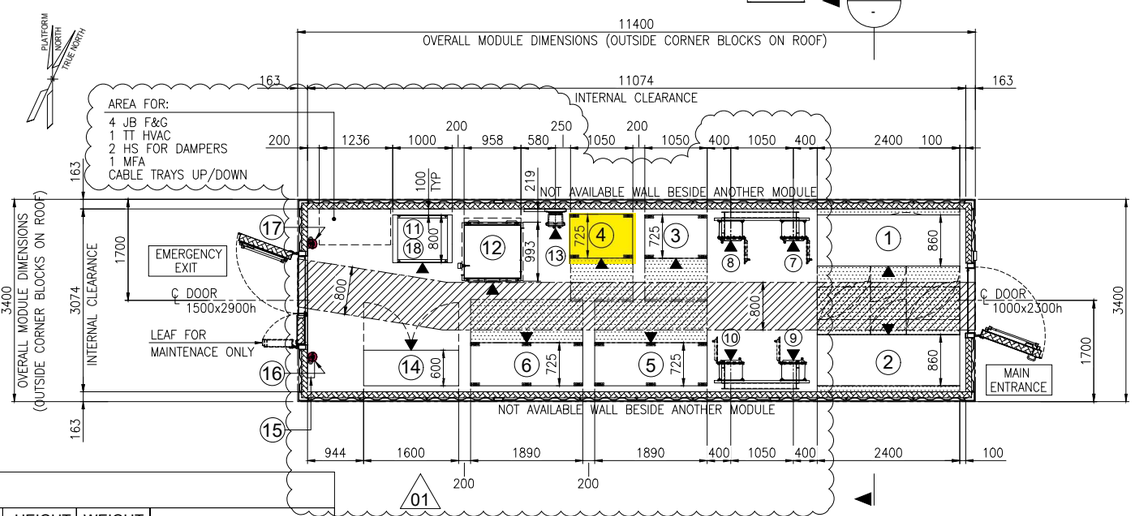
SECTION B -



01

SECTION A -

B -



A -

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

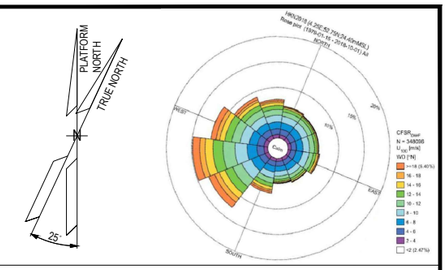
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA 01	450	341	632	100	
11	NC-200F2	NAVAID PANEL	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

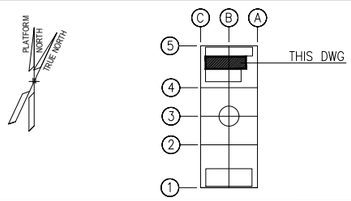
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

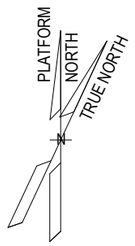
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24

A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg



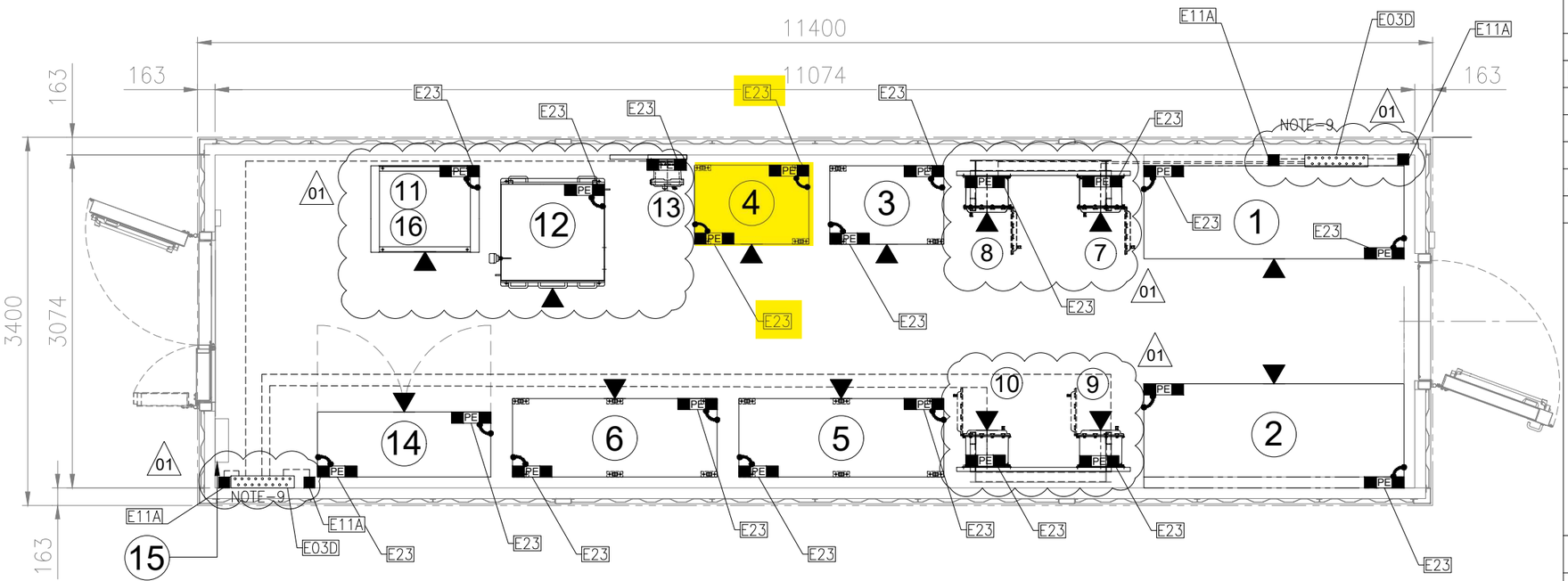
	EQUIPMENT LIST	
REF.	TAG No.	DESCRIPTION
1	UP-200F3	AC UPS 35kVA
2	UP-200F4	AC UPS 15kVA
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA
11	NC-200F2_BC-200F2A/B	NAVAID PANEL
12	BA-200F2	BATTERY BOX NAVAID
13	CB-200F2	ISOLATOR BOX NAVAID
14	B300-HSB-001	DISTRIBUTION & HVAC PANEL – AC/UPS ROOM
15	–	EYE WASH STATION
16	BC-200F2	BATTERY CHARGER NAVAID

01 (rows 11–12)

01 (rows 15–16)

NOTES

1. THIS DOUCMENT IS VALID ONLY FOR EARTHING LAYOUT.
2. THE CABLE SIZE SHALL BE CONFIRMED.
3. THE EXACT POSITION OF EARTHING/MARSHALLING BUS BAR SHALL BE DEFINED BY VENDOR.
4. THE EARTHING BUS BAR INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5. FOR TYPICAL DETAILS PLEASE REFER DOCUMENT "123A90-DDL-EL-DD-20090-ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM".
6. DUE TO THE TOP CABLE ENTRIES THE EARTHING BUS BAR INSIDE THE CABINETS SHALL BE INSTALLED AT THE TOP OF THE CABINETS THEMSELVES.
7. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER DOCUMENT 123A90-DDL-EL-RE-20154.
8. ALL THE NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE SOUTH-WEST CORNER AT AN ELEVATION OF 2.5M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.5M.



EARTHING LAYOUT

"B-300" UPSs & BATTERIES SWITCHROOM

PLAN

EL.+ 23.310 T.O.S.

SYMBOL	DESCRIPTION
PE	EARTHING BUS
	EARTHING BAR TINNED COPPER WITH no.18 HOLES
--------	35sq.mm Y/G INSULATED COPPER CONDUCTOR FOR PE
PE	PROTECTIVE EARTH
■	EARTHING BOSS AISI316L
	JUMPER CONNECTION
▲ 01	FRONT OF EQUIPMENT

REFERENCE	
DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT-UPSs & BATTERIES SWITCHROOM
1724000049-AR-DD-00020	B-300 DETAILED DRAWINGS – E&I SHELTERS

01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20138**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/05/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT – UPSs & BATTERIES SWITCHROOM
"B-300" UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:50

A3 | DRAWING NO. 123A90-DDL-EL-DL-20138 | SHEET 003 | REV. 01

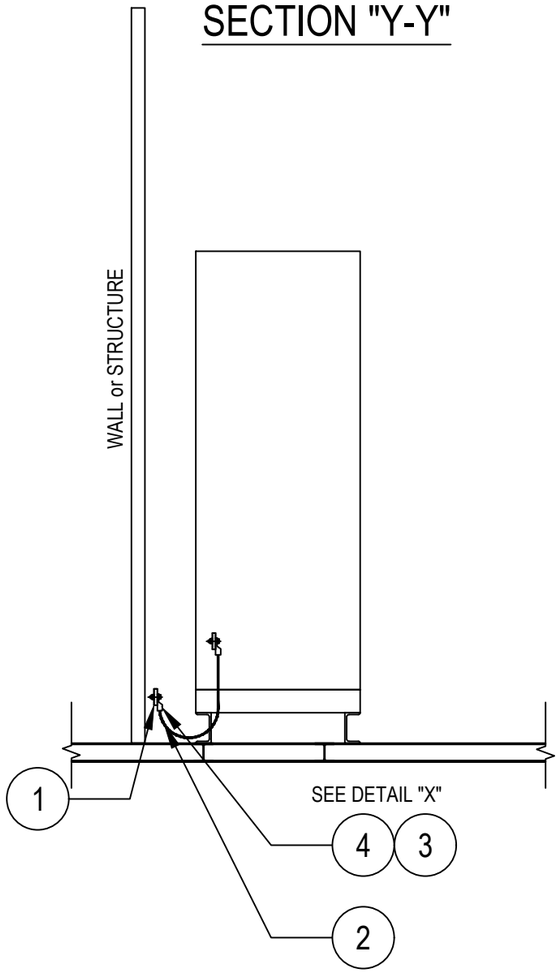
F.to UNI A3: 420mmx297mm

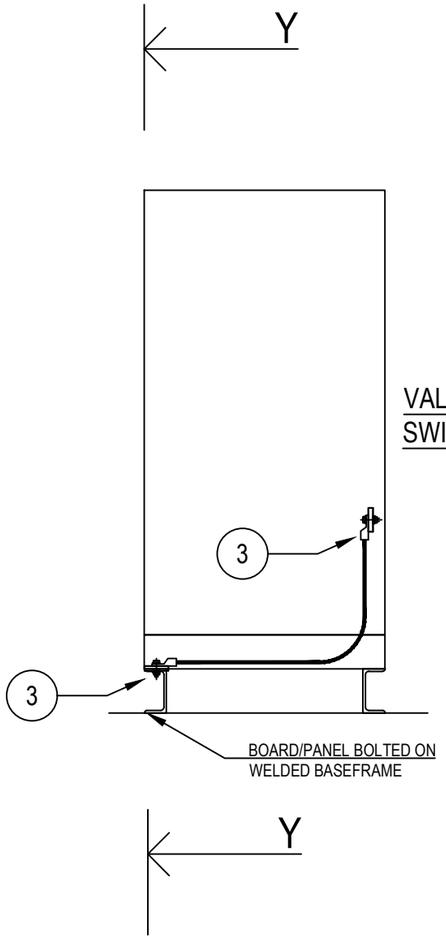
File Name : 123A90-DDL-EL-DL-20138 Rev. 01

E23

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	MARSHALLING EARTHING BAR	TINNED COPPER	50X5		NOTE 1
2	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm² SEE NOTE 1		NOTE 1
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm² SEE NOTE 1	4	NOTE 1
4	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	4	

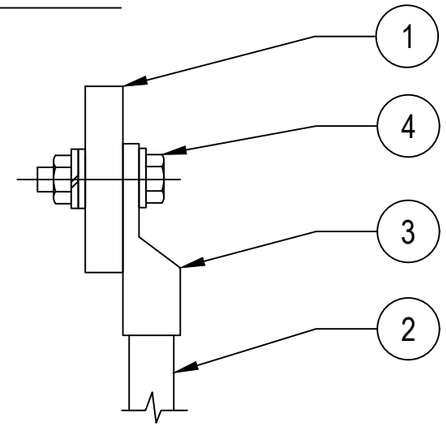
SECTION "Y-Y"





VALID FOR HV/LV SWITCHGEAR

DETAIL "X"



NOTES:

1) FOR SIZE OF THE EARTHING CABLE SEE ALSO EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_G	25/10/24	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 PANELS/BOARDS IN TECHNICAL ROOM

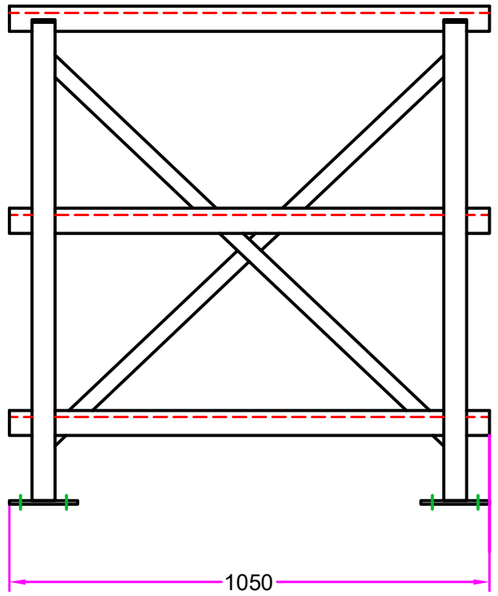
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

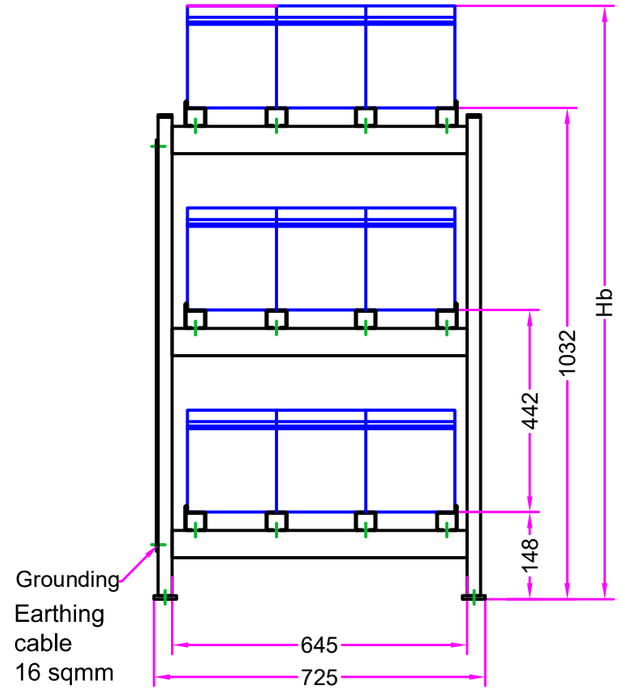
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F.to UNI A3: 420mmx297mm

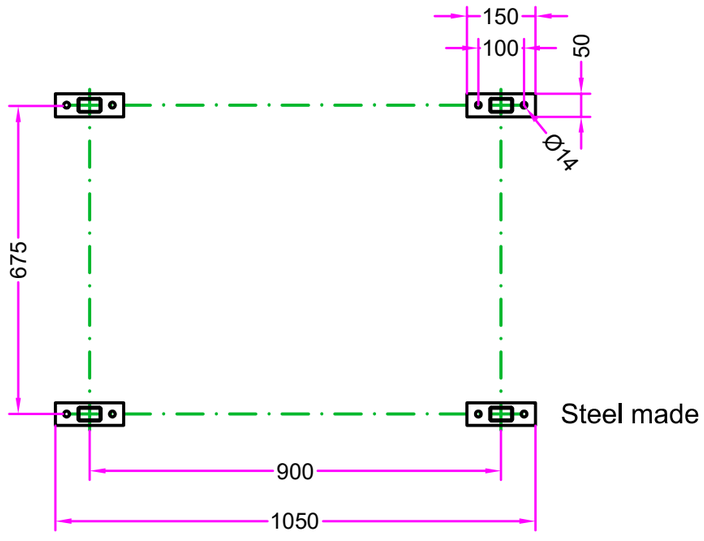
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Battery Rack
BA-200F3 A/B





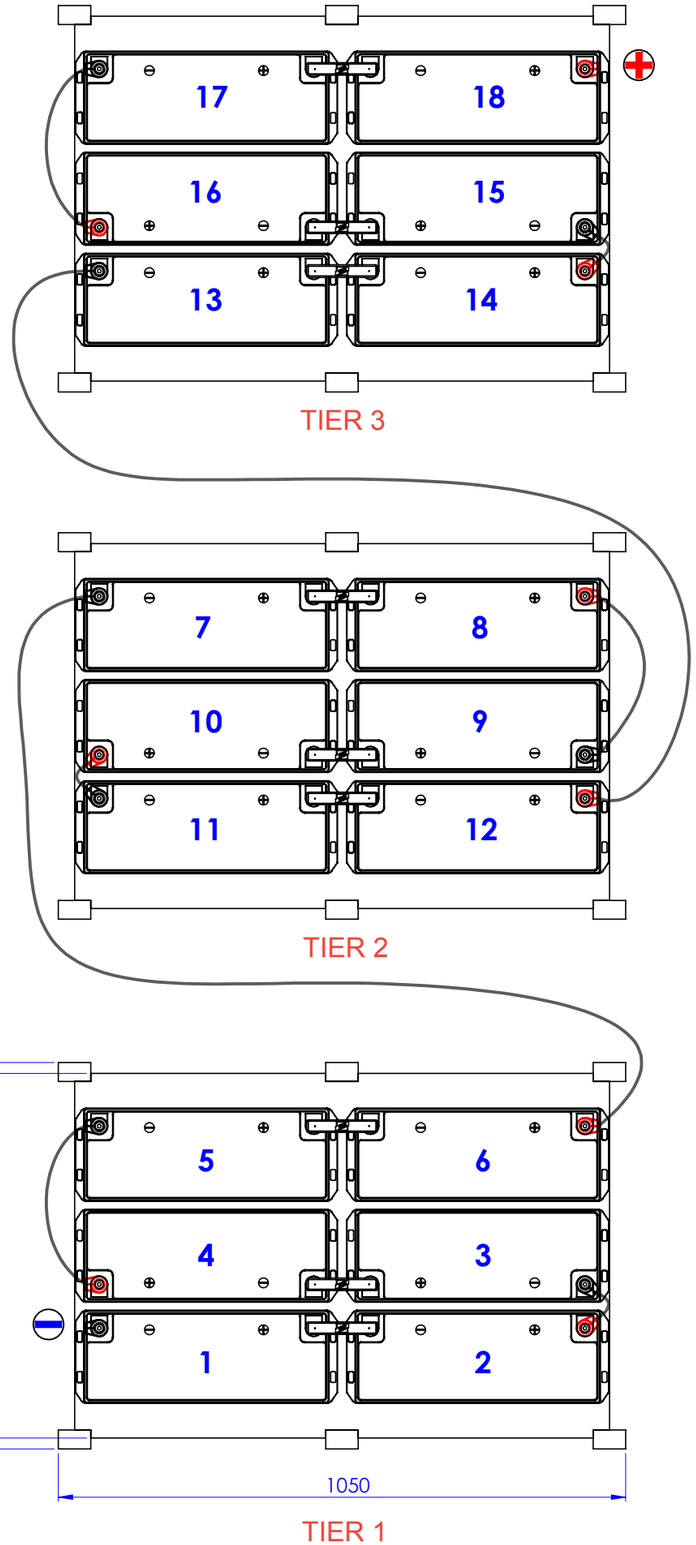
Foot-Print:



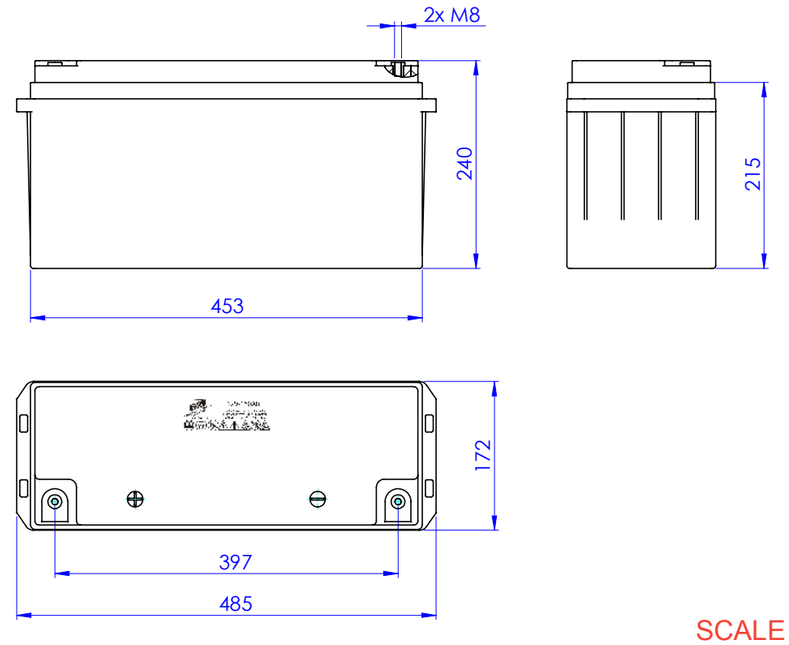
Rack weight : 54,7 kg
Battery weight : 855,0 kg
Total weight : 909,7 kg

Material:	S235 JR EN 10025 (St-37-2)		Date	Name	Checked	Execution: Rack, Standard	Drawing-/Article No: 3L3115	Rev: 00
Coating:	Plastic Coated		16/24	Riedel	St.Selig	Type: 3E-PGL 3-17 with FIX002		
Tolerance:	DIN ISO 2768 "C"		Scale: none			Production Details:	Welding execution according to	
Battery:								

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BATTERY BLOCK : FLG12-150



SCALE 1:5

BILL OF MATERIALS	CODE	WEIGHT (kg)	Q.TY
CELL FLG 12-150	11000495	47,50	18
COPPER TIN STRIP FLL-FHP serie	41000222	0,04	9
CONNECTION AND AGM COVER CENTER DISTANCE 100	41000251	0,01	9
CELLS CONNECTION CABLE 50 mm	21000191	0,5	7 m
CABLE LUG F8 X 50	41005167	0,3	18
CABLE LUG COVER BLACK 50040	41000243	0,008	9
CABLE LUG COVER RED 50039	41000244	0,008	9

REV./REV.:	DATA/DATE:	PROGETTISTA/DESIGNER:	DISEGNATO/DRAWN:	APPROVATO/APPROVED:	DESCRIZIONE MODIFICHE/DESCRIPTION REVISIONS:
TOLLERANZE GENERALI/GENERAL ALLOWANCES: NORMA UNI EN 22768-mk		CARATTERISTICHE ELETTRICHE/ELETTRIC CHARACTERISTICS:	PESO BATT./BTR. WEIGHT: 855.42 kg		PROGETTISTA/DESIGNER: P. VECCHIARELLI
FINITURA SUPERFICIALE/SURFACE FINISHING: NORMA UNI ISO 1302		TIPO ELEMENTO/CELL TYPE: 18 FLG12-150	PESO EL./CELL WEIGHT: 47.50 kg		DISEGNATO/DRAWN: P. VECCHIARELLI
FORME E POSIZIONE/FORMS AND POSITION: NORMA UNI ISO 1101					APPROVATO/APPROVED: F. PAGLIARINI
SCALA/SCALE: 1:8	PROIEZIONE/PROJECTION:	FOGLIO/SHEET: A2	CODICE SAP EL./CELL SAP CODE: 11000495		DATA/DATE: 10/04/2024
DESCRIZIONE/DESCRIPTION:				FILE-DISEGNO/FILE-DRAWING: layout 18 x FLG 12-150	REV./SAP.: 1

FAAM

1724000372-EL-DG-00011

AC UPS 35kVA - 18 x FLG 12-150

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CAE EPLAN Electric P8

AUXILIARY
From Lighting & Small Power DB BOP DP-200N1
(Cubicle 03-Q41)
100-240V/N/PE~50/60Hz
back-up fuse gG10A 3G2.5mm2

LINE A
From LV Switchgear SG-200N1
(Cubicle A3/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

From LV Switchgear SG-200N1
(Cubicle A7/02)
Bypass mains 400V;3/PE~50Hz
gG63A 4G35mm2

LINE B
From LV Switchgear SG-200N1
(Cubicle A4/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

Not included in the AEG shipment

Code	Description
Q1	Rectifier input mains breaker
T40	Rectifier input isolation transformer
A1	Rectifier
A2	Inverter
T1	Inverter output isolation transformer
A3-A4	Static by-pass switch
A18	Display control module
A85	Heater
H1	Light

+MBC1
BY-200F3
Bypass transformer cabinet 40 kVA
1000007888.020
10009757

-Q10 L=80/65A I=0,8kA Icu=50kA
-T8 400V/400V 40kVA
-Q28.1 NC
-Q28.2 NC

+UPS1
BC-200F3A
Protect 8.33 40-400-210-400
1000007888.010
10009756

+UPS2
BC-200F3B
Protect 8.33 40-400-210-400
1000007888.010
10009756

-Q1 L=100/85A I=1,0kA Icu=50kA
-T40
-A1 REC
-A2 INV
-T1
-F1,-F2,-F3
-A3 SBS
-A4
-A18 Display
-A20 Parallel Adapter
INV CAN -X3 1-3 → 203 / 1.6
INV Sync -X5 1-4 → 205 / 1.6
-L11,-L12,-L13 Parallel preventive choke coil
-A24.1 BLÜ-PRO
-F91
-A12 ,-A13 Remote signaling

-Q71 NC
-Q72 NC
-Q29 1 INV operation 2 Manual bypass
-F25

DP-200F3
-QF31 B32A 300mA
-QF32 B32A ^^0mA
-QF33 B32A 300mA
-QF34 B16A 300mA (5pc)
-QF38 B16A 300mA
-QF39 B10A 300mA (4pc)
-QF42 B10A 300mA
-QF43 B10A (8pc)
-QF50 B10A
-QF51 B6A
-QF52 B6A

Not included in the AEG shipment
max. gG16A — max. gG16A
Load 400/230V;3/N/PE~50Hz

+BFB1
CB-200F3A
Battery fuse box 200 A
-Q2 L=200A
DC 24V max. 300W
2(1x70 mm2)

+BFB2
CB-200F3B
Battery fuse box 200 A
-Q2 L=200A
DC 24V max. 300W
2(1x70 mm2)

+BAT1
BA-200F3A
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

+BAT2
BA-200F3B
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors) attached.
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

*2 Connection cables are not included.

						Date	14.05.2024
01	5009000002053	13.08.2024	Bedoschäfer	Editor	EDC		
02	5009000007089	27.08.2024	Bedoschäfer	Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

System 40 kVA
Single-line diagram

1000007888_010 en

& FFA

A0 sheet 1 sheets 1

1000007888_010

S-701D Data Sheet for
AC Uninterruptible Power Systems (UPS) (IEC 62040-3)

JIP33 JOINT INDUSTRY PROGRAMME

Row							Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
5		**GENERAL**					
6	5.1.2	Vendor :	Input Data	AEG Power Solutions			
7	5.1.2	Order status :	for purchase	Noted			
8	5.1.2	Purchase order number, date :	1724000372 123A90A rev1 dated 22/4/2024	Noted			
9	5.1.2	Manufacturer :	Input Data	AEG Power Solutions			
10	5.1.2	Model number :	Input Data	2 x Protect 8.33 S10 40kVA			
11	5.1.2	Serial number :	Input Data	Released after production			
12	5.2.3	Application :	industrial	Noted			
13	5.3.3	Purchaser specified rated output power :	35	40kVA	kVA		
14	5.1.1	Quantity :	1	Confirmed. Redundant system			
15		Conformity assessment system (CAS) level :	D	Noted			
16		**CONFIGURATION**					
17	5.1.1, A.1, Figure A.2, Figure A.3A, Figure A.3B, Figure A.6	UPS configuration :	simplified parallel UPS with common bypass & common output-Figure A.3A	Confirmed			
18	5.1.1, B.1	UPS topology :	double conversion	Confirmed			
19	5.1.1	Static switch configuration :	in both inverter and bypass path	Confirmed			
20	5.4.2.3	Battery configuration :	2 x 50%	Confirmed. 15 min. autonomy each battery			
21	5.3.2, 5.3.4	Performance classification :	manufacturer to advise	-			
22	8.1.1.3	Bi-directional rectifier :	No	Not applicable			
23	8.4.2.11	Remote access required :	Yes (read only)	Confirmed. Modbus TCP			
24	8.4.2.11	Hardware (adapters, connectors, cables, etc.) required for remote access :	manufacturer to advise	Confirmed			
25	8.1.1.5, 8.1.1.6	On-line battery monitoring facility required :	string monitoring	Confirmed			
26	8.1.1.4	On-line battery testing feature required :	No	Noted			
27	8.1.1.4	Battery test load interface :	No	Noted			
28	5.4.2.3	DC earth leakage monitoring required :	No	Noted			
29	7.4.14	Single line diagram and status display :	on HMI	LCD display with synoptic			
30	8.1.2.11	Black start feature required :	Yes	Confirmed			
31	8.1.1.1	Earth screen required for isolation transformer :	manufacturer to advise	Confirmed on the by-pass isolation transformer			
32		**PHYSICAL ASPECTS**					
33	7.2.1	Mounting :	floor mounting	Confirmed			
34	7.2.1	Overall cabinet dimensions - length :	manufacturer to advise	900 + 600 + 900 mm	mm		
35	7.2.1	Overall cabinet dimensions - depth :	manufacturer to advise	860 mm	mm		
36	7.2.1	Overall cabinet dimensions - height :	manufacturer to advise	1915 mm	mm		
37	7.2.1	Reference outline drawing number :	Input Data	1724000372-EL-DA-00004			
38	7.2.1	Total UPS cabinet mass :	manufacturer to advise	2258 kg	kg		
39	7.2.1	Total UPS mass with batteries (if integrated) :	manufacturer to advise	Batteries not integrated	kg		
40	7.2.4, 7.2.5	Cable entry location :	top	Confirmed. Through by-pass cabinet by means of cable glands			
41	7.2.4, 7.2.5	Cable entry type :	removable - undrilled plate	Confirmed			
42	7.2.4, 7.2.5	Gland plate material :	manufacturer standard	Steel			
43	7.2.1	Paint colour :	supplier standard	RAL7035			
44	7.2.1	Canopy for cabinet required :	No	Noted			
45	7.3.9	Document holder :	Yes	Confirmed			
46		**INSTALLATION**					
47	4,1	Site :	offshore - fixed	Noted. Painting class C3-H			
48	4,1	Location of UPS cabinet installation :	indoor	Noted			
49	7.3.1, 7.3.2	Front access clearance dimensions for operation and maintenance :	800	Noted	mm		
50	7.3.2	Side clearance for ventilation (if required) :	manufacturer to advise	0	mm		
51	7.3.2	Rear clearance for ventilation (if required) :	manufacturer to advise	100 mm	mm		
52	7.2.3, 7.9.3	Installed location of battery :	inside UPS room	Battery housed on rack			
53	7.2.3	Maximum battery assembly dimensions (L x D x H):	manufacturer to advise	Battery rack 1050 x 725 x 1032	mm		
54		**SAFETY**					
55	5.1.1	Accessibility :	operator access area	Front access			
56	5.1.1	Key required for cabinet :	Yes	Confirmed			
57	7.2.2	Degree of protection (with closed doors) :	IP31	IP43			
58	7.2.2	Degree of protection (with open doors) :	IP2X	Confirmed			
59	7.7.5	Cooling fan replacement while UPS in service :	No	Noted			
60	5.1.2	Local language for caution/danger/warning labels :	English	Confirmed			
61		**ELECTROMAGNETIC COMPATIBLITY**					
62	5.1.4	Emission :	UPS Cat C3	Confirmed			
63	5.1.4	Immunity :	UPS Cat C3	Confirmed			
64		**ENVIRONMENTAL CONDITIONS**					
65	4.2.1.1	Minimum ambient temperature (operation) :	-8,4	Confirmed with heater option included	°C		
66	4.2.1.1	Maximum ambient temperature (operation) :	40	Confirmed	°C		
67	4.2.1.1	Maximum relative humidity (operation) :	95	Confirmed. Not condensing	%		
68	4.2.1.1	Temperature at which relative humidity is specified (operation) :	Input Data	-	°C		
69	4.2.1.2	Maximum altitude (operation) :	Sea level	Noted	m		
70	4.2.2.1	Minimum ambient temperature (storage and transportation) :	-5	Noted	°C		
71	4.2.2.1	Maximum ambient temperature (storage and transportation) :	40	Noted	°C		
72	4.2.2.1	Maximum relative humidity (storage and transportation) :	95	Noted	%		
73	4.2.2.1	Temperature at which relative humidity is specified (storage and transportation) :	Input Data	-	°C		
74	4.3.2	Seismic requirement data :	Zone 2	Noted			
75	4.2.2.1	Storage site of UPS :	indoor – natural ventilation	Noted			
76	4.3.2	Additional or unusual conditions (operation) :	Input Data	Not applicable			
77	4.3.3	Additional or unusual conditions (storage and transportation) :	Input Data	Not applicable			
78	5.1.5	Acoustic noise at 1 m - normal mode :	70	< 65 dB(A)	dBA		
79	5.1.5	Acoustic noise at 1 m - stored energy mode :	70	< 65 dB(A)	dBA		
80		**COMMUNICATION INTERFACE(S)**					
81	5,6	(1) Interface media for SCADA (ICSS / DCS) :	serial	Modbus TCP + relays			
82	5,6	(1) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
83	5,6	(1) Interface protocol for SCADA (ICSS / DCS) :	Modbus	Modbus TCP + relays			
84	5,6	(2) Interface media for electrical management / control system :	serial	Modbus TCP + relays			
85	5,6	(2) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
86	5,6	(2) Interface protocol for electrical management / control system :	Modbus	Modbus TCP + relays			
87	5,6	(3) Remote access / monitoring software required:	Yes	Noted			
88	5,6	(3) Interface media for remote access / monitoring:	ethernet (fiber)	Noted			
89	5,6	(3) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
90	5,6	(3) Interface protocol for remote access / monitoring :	Modbus	Modbus TCP + relays			
91		**AC INPUT SPECIFICATIONS**					
92	5.2.1	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
93	5.2.1	Voltage (steady state, R.M.S) - tolerance :	+/- 10	Confirmed	%		
94	5.2.1	Frequency - rated :	50 Hz	Confirmed			
95	5.2.1	Frequency - tolerance :	+/- 2	Confirmed	%		
96	5.2.2	Phases required :	3	3			
97	5.2.2	Neutral required :	Yes	Confirmed. Neutral not required for the rectifier supply			
98	5.2.2	Current (R.M.S) - rated (with the energy storage device charged) :	manufacturer to advise	71,2A	A		
99	5.2.2	Power factor :	manufacturer to advise	Data not characterized by the factory. Measurable on request			
100	5.2.2	In-rush (% of rated current) :	manufacturer to advise	Typically 10 x In	%		
101	5.2.2	In-rush (time) :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
102	5.2.2	Maximum current (with low input volt and energy storage device charging) :	manufacturer to advise	92A at 400Vac	A		
103	5.2.2	Time for overload (125 % of rated current) :	10	Confirmed	min		
104	5.2.2	Time for overload (150 % of rated current) :	1	Confirmed	min		
105	5.2.2	Total harmonic distortion - current (THD p.u.) :	8	Confirmed. The AC UPS works with an input voltage harmonic distortion ≤ 8%	%		
106	5.2.3	Short circuit current of the input supply (Minimum and Maximum) :	50	Confirmed. The charger is equipped with an input MCCB (Q1) with Isc = 50kA	kA		
107	5.2.2	Minimum short circuit current :	Input Data	Data not characterized by the factory. Measurable on request	kA		
108	5.2.2	Earth leakage current :	Input Data	Data not characterized by the factory. Measurable on request	mA		
109	5.2.2	AC power distribution system - compatibility :	TN-S	Confirmed			
110	5.2.3	Additional or unusual conditions :	Input Data	Not applicable			
111	5.2.3, 7.5.4	Cable size (cross-section area) - input mains :	Input Data	min 50 sqmm - max 2x95 sqmm	sq.mm.		
112	5.2.3, 7.5.4	Cable size (cross-section area) - input bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
113	5.2.3, 7.5.4	Cable size (cross-section area) - input maintenance bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
114	7.4.8, 8.1.1.1	Input isolation transformer required :	Yes	Confirmed			
115	7.4.10	Input isolation transformer winding :	supplier standard	Aluminium			
116		**DC AND BATTERY SPECIFICATIONS**					
117	5.4.2.2	DC voltage level :	220	Confirmed	V d.c.		
118	5.4.2.2	Design life :	5	> 12 years	years		
119	5.4.2.2	Float service life :	manufacturer to advise	Dependent from temperature	years		
120	5.4.2.2	Shelf life of battery :	manufacturer to advise	3 months	months		
121	5.4.2.2	Quantity of cells and strings :	manufacturer to advise	18 blocks - 1 string	nos.		
122	5.4.2.2	Nominal voltage (total) :	manufacturer to advise	216V	V d.c.		
123	5.4.2.2	Battery technology :	sealed nickel cadmium	Lead-Acid VRLA GEL			
124	5.4.2.2	Nominal AH capacity :	manufacturer to advise	150Ah	AH		
125	5.4.2.2	Discharge rate (C-rate) :	Select	C20			
126	5.4.2.2	Electrolyte fill status :	manufacturer standard	Not applicable			
127	8.1.2.3	Purchaser's requirement (% of battery recharge level - 1) :	80	Confirmed with charging current limited to 0,1C	%		
128	8.1.2.3	Purchaser's requirement (time for battery recharge level - 1) :	10	Confirmed	Hours		
129	8.1.2.3	Purchaser's requirement (% of battery recharge level - 2) :	100	Data not characterized by the factory. Measurable on request	%		
130	8.1.2.3	Purchaser's requirement (time for battery recharge level - 2) :	24	Data not characterized by the factory. Measurable on request	Hours		
131	5.4.2.2	Stored energy time (Autonomy time at 100% rated load) :	30	Confirmed with both batteries	min		
132	5.4.2.2	Restored energy time (recharge time to 80% capacity):	manufacturer to advise	10h	hours		
133	5.4.2.2	Ambient reference temperature :	40	Confirmed	°C		
134	5.4.2.2	Earth condition/isolation :	manufacturer to advise	floating			
135	5.4.2.2	Ripple current (R.M.S) :	manufacturer to advise	< 2% RMS	%		
136	5.4.2.2	Nominal discharge current (stored energy mode):	manufacturer to advise	-	A		
137	5.4.2.2	DC Fault current rating :	manufacturer to advise	Data not characterized by the factory. Measurable on request	A d.c.		
138	5.4.2.2	Cable volt drop recommendation (≤ % at nominal discharge current) :	manufacturer to advise	2%	%		
139	5.4.2.2	Charging regime :	manufacturer to advise	Constant voltage, current limited			
140	5.4.2.2	Charge voltage (float) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
141	5.4.2.2	Charge voltage (boost) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
142	5.4.2.2	Charge voltage (equalising) and tolerance band :	manufacturer to advise	Not applicable to VRLA batteries	V d.c.		
143	5.4.2.2	Minimum end of discharge voltage :	manufacturer to advise	178,2V	V d.c.		
144	5.4.2.2	Charge current limit (or range) :	limitation of batteries charging to 30% of the UPS sizing	15A (0,1C)	A d.c.		
145	5.4.2.2	Temperature compensated charging required:	Yes	Confirmed			
146	5.4.2.3	Battery isolation box required :	Yes	Confirmed			
147	5.4.2.3	Additional or unusual conditions :	Input Data	Not applicable			
148	5.4.2.3	Load profile for battery design, attached :	No	Noted			
150		**BATTERY ROOM**					
151	4.2.1.1	Minimum ambient reference temperature :	-8,4	-8,4°C (used for battery sizing)	°C		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
152	4.2.1.1	Maximum ambient reference temperature :	40	+40°C (used for battery sizing)	°C		
153	5.4.2.1	Area classification :	safe	Noted			
154	5.4.2.1	Hazardous area classification :	Zone 2	Noted			
155	5.4.2.1	Minimum gas subdivision and temperature class (for equipment in battery room) :	Select	-			
156	8.1.2.10	Temperature sensor (for VRLA / partial gas recombination batteries) :	Yes	Confirmed. Standard sensor			
157		**BATTERY ISOLATOR BOX SPECIFICATIONS**					
158	7.9.1	Enclosure material :	manufacturer standard	Aluminium alloy			
159	7.9.1	Mounting :	Select	Wall mounting			
160	7.9.1	Breathing valve required :	manufacturer to advise	No			
161	7.9.1	Internal earth bar :	tinned copper	-			
162	7.9.3	Minimum design temperature :	-8,4	Noted	°C		
163	7.9.3	Maximum design temperature :	40	Noted	°C		
164	7.9.3	Maximum relative humidity :	95	Noted	%		
165	7.9.3	Temperature at which relative humidity is specified:	Input Data	-	°C		
166	7.9.4	Degree of protection :	IP 31	IP65			
167	7.9.5	Area classification :	safe	Noted			
168	7.9.5	Hazardous area certification required :	none	-			
169	7.9.5	Hazardous area classification :	N/A	Not applicable			
170	7.9.5	Hazardous area level of protection :	N/A	Not applicable			
171	7.9.6	Cable entry :	top	Bottom with cable glands			
172	7.9.6	Cable indirect entry via 'ex e' enclosure :	No	Not applicable			
173	7.9.6	Battery cable size (cross-section area) :	Input Data	70 sqmm armored cable class-2	sq.mm.		
174	7.9.6	Cable entry diameter in battery box (ISO metric) :	Input Data	22,6 mm			
175	7.9.7	Battery isolator type :	MCCB	Confirmed			
176	7.9.8	Rated current of breaker / switch fuse unit :	manufacturer to advise	200A	A		
177	7.9.8	Rated breaking current (Icu) - (if breaker used) :	manufacturer to advise	36kA	kA		
178	7.9.10	Breaker status potential free contact (NO) :	two	Confirmed			
179	7.9.9	Under voltage trip feature required :	Yes	Confirmed			
180	7.9.9	Under voltage trip coil for :	black start reserve	Confirmed			
181	8.1.2.12	ESD trip required :	Yes - via shunt trip	Yes - through SIL relay			
182	8.1.2.12	ESD override key switch :	key captive in overridden position and with status contact	Confirmed			
183	7.9.9	Over voltage trip required :	Yes	Not applicable			
184		**AC OUTPUT SPECIFICATIONS**					
185	5.3.2	Rated output power (apparent) :	35	40kVA	kVA		
186	5.3.2	Rated output power (active) :	28	32kW	kW		
187	5.3.2	AC power distribution system - compatibility :	TN-S	Noted			
188	5.3.2	Phases available :	3	Confirmed			
189	5.3.2	Neutral available :	Yes	Confirmed			
190	5.3.2	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
191	5.3.2	Voltage - normal mode variation :	manufacturer to advise	+/- 1%	%		
192	5.3.2	Voltage - storage energy mode variation :	manufacturer to advise	+/- 1%	%		
193	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - linear :	5	< 3%	%		
194	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - non linear :	5	Confirmed	%		
195	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - linear :	5	< 3%	%		
196	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - non linear :	5	Confirmed	%		
197	5.3.2	% Voltage unbalance, 100% load unbalance :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
198	5.3.2	Phase angle displacement, 100% load unbalance:	manufacturer to advise	Data not characterized by the factory. Measurable on request	°		
199	5.3.2	% Voltage transient, 100% step load - linear :	manufacturer to advise	+/- 2%	%		
200	5.3.2	Voltage transient recovery time, 100% step load - linear :	manufacturer to advise	2 ms	s		
201	5.3.2	% Voltage transient, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
202	5.3.2	Voltage transient recovery time, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
203	5.3.2	% Voltage transient, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
204	5.3.2	Voltage transient recovery time, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
205	5.3.2	% Voltage transient, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
206	5.3.2	Voltage transient recovery time, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
207	5.3.2	Frequency (steady state) - rated :	50	Confirmed	Hz		
208	5.3.2	Frequency (steady state) - normal mode variation:	2	+/- 0,1%	%		
209	5.3.2	Frequency (steady state) - storage energy mode variation :	2	+/- 0,1%	%		
210	5.3.2	Frequency (steady state) - free running variation:	2	+/- 0,1%	%		
211	5.3.2	Synchronization (maximum ± % range of rated frequency) :	manufacturer to advise	-	%		
212	5.3.2	Maximum synchronism phase error (referred to 360° cycle) :	manufacturer to advise	-	%		
213	5.3.2	Maximum slew rate :	manufacturer to advise	-	Hz/s		
214	5.3.2	Current (R.M.S) - rated :	manufacturer to advise	58A	A		
215	5.1.8.1, 5.3.2	Current (R.M.S) - overload capability (% of rated current for ten minutes) :	manufacturer to advise	125%	%		
216	5.1.8.2, 5.3.2	Current (R.M.S) - overload capability (% of rated current for one minute) :	manufacturer to advise	150%	%		
217	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (% of rated current) :	manufacturer to advise	3,68 x In (1ph) - 2,02 x In (3ph)	%		
218	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (time duration) :	manufacturer to advise	500 ms	s		
219	5.3.2	Current (R.M.S) - limitation (% of rated current) :	manufacturer to advise	-	%		
220	5.3.2	Current (R.M.S) - limitation (time duration) :	manufacturer to advise	-	s		

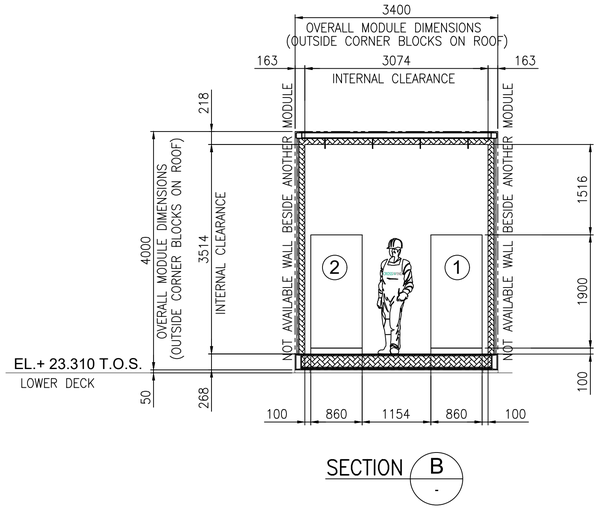
Row	S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)						Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
221	5.3.2	Current (R.M.S) - fault clearing capability (normal mode) :	manufacturer to advise	-	A		
222	5.3.2	Current (R.M.S) - fault clearing capability (stored energy mode) :	manufacturer to advise	-	A		
223	5.3.2	Load power factor - rated :	manufacturer to advise	0,8			
224	5.3.2	Load power factor - displacement (permissible limit lead) :	manufacturer to advise	Cap - 1 - Ind			
225	5.3.2	Load power factor - displacement (permissible limit lag) :	manufacturer to advise	Cap - 1 - Ind			
226	5.3.2	Efficiency in normal mode - 100% load :	manufacturer to advise	86,4%	%		
227	5.3.2	Efficiency in normal mode - 75% load :	manufacturer to advise	87,3%	%		
228	5.3.2	Efficiency in normal mode - 50% load :	manufacturer to advise	87,2%	%		
229	5.3.2	Efficiency in normal mode - 25% load :	manufacturer to advise	83,8%	%		
230	7.4.8	Output isolation transformer required :	No	Yes. Output transformer is included in AEG standard design			
231	7.4.10	Output isolation transformer winding :	Select	Aluminium			
232	7.6.5	AC output neutral earth link :	earthed	Noted. Externally			
233	7.1.6	Reference document to AC output distribution board :	To see Electrical Load List	Noted			
234	5.3.3	Integrated AC output distribution board with MCBs:	Yes	Confirmed			
235	5.3.3	Cable size (cross-section area) - output:	manufacturer to advise	min 16 sqmm - max 2x95 sqmm	sq.mm.		
236		**BYPASS SPECIFICATIONS**					
237	C.3	Bypass transfer time :	manufacturer to advise	0	msec		
238	C.3	Bypass static switch rated current :	manufacturer to advise	40kVA - 58A	A		
239	C.3	Bypass protection fuse or circuit breaker rating :	manufacturer to advise	MCCB 65A	A		
240	7.4.8	Bypass transformer required :	Yes	Confirmed			
241	7.4.10	Bypass transformer winding :	copper or aluminum	Aluminium			
242	7.3.5	Maintenance bypass and bypass transformer location:	integrated	Manual by-pass integrated			
243	8.3.6, C.5	Overall maintenance bypass :	internal	Q29 manual by-pass integrated			

ITEM	Tag	CB-200F3A	: Isolator Battery Box for AC UPS 35 kVA	Dwg	123A90-DDL-EL-DS-20032		
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)	Module	LD_B-300		
TASK	code	C10000855	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form CPX00	Miscellaneous Electrical Equipment

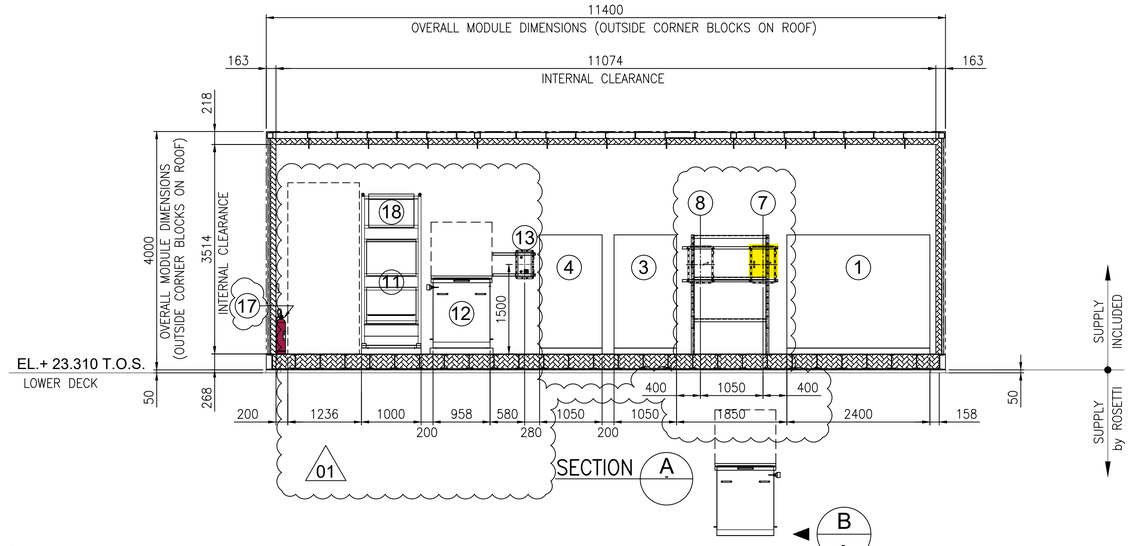
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	OK
4	Check nameplate data is correct.	OK
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	PL
8	Check items are properly fixed on support.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

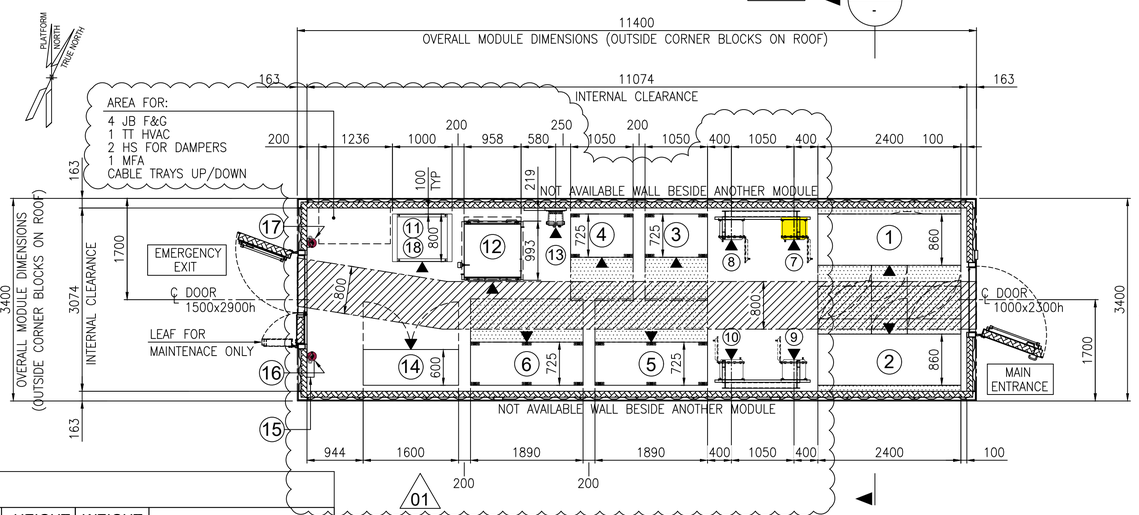
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-10-29T16:03:14.725Z	Digitaly signed by Giovanni Tangianu 2024-11-02T10:50:06.231Z	



SECTION B



SECTION A



A

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

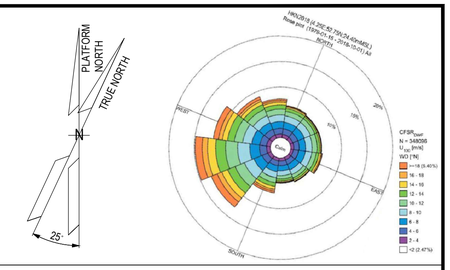
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

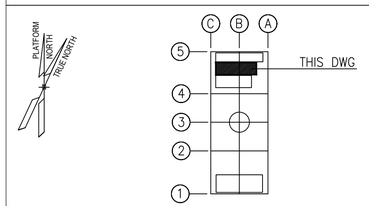
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

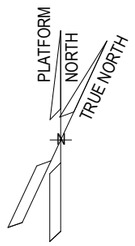
CROSSWIND
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg



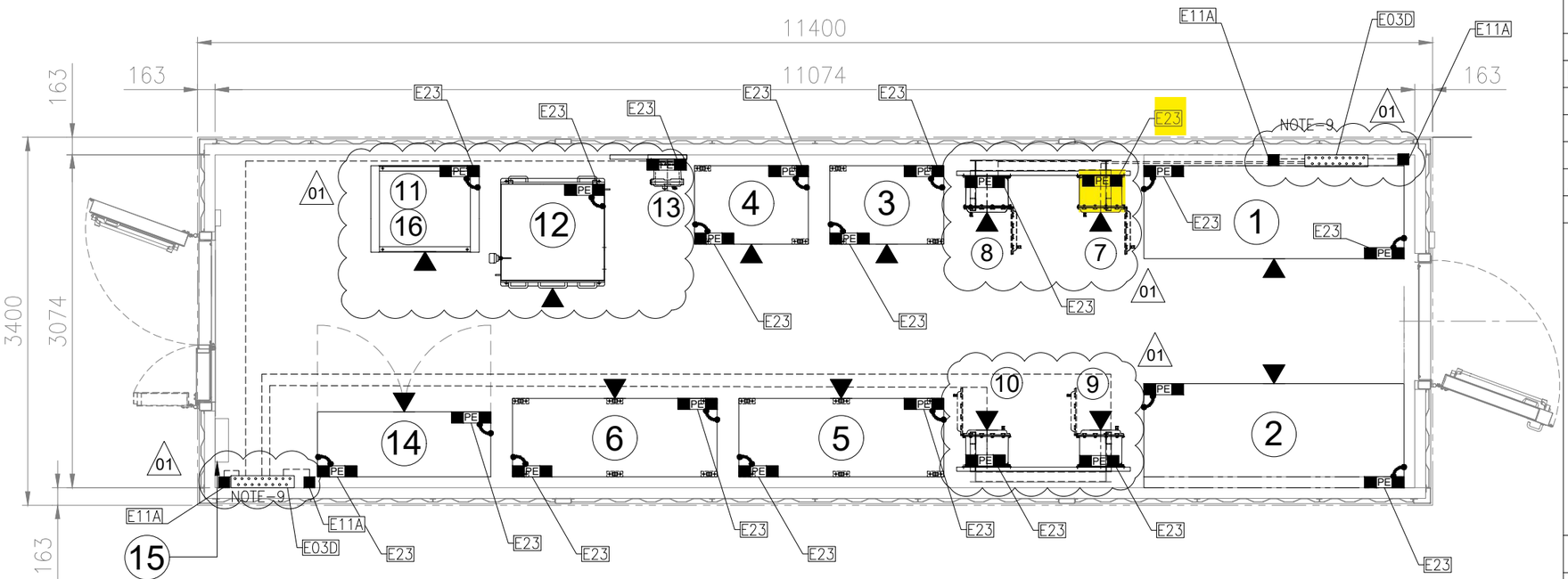
	EQUIPMENT LIST	
REF.	TAG No.	DESCRIPTION
1	UP-200F3	AC UPS 35kVA
2	UP-200F4	AC UPS 15kVA
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA
11	NC-200F2_BC-200F2A/B	NAVAID PANEL
12	BA-200F2	BATTERY BOX NAVAID
13	CB-200F2	ISOLATOR BOX NAVAID
14	B300-HSB-001	DISTRIBUTION & HVAC PANEL – AC/UPS ROOM
15	–	EYE WASH STATION
16	BC-200F2	BATTERY CHARGER NAVAID

01

01

NOTES

1. THIS DOUCMENT IS VALID ONLY FOR EARTHING LAYOUT.
2. THE CABLE SIZE SHALL BE CONFIRMED.
3. THE EXACT POSITION OF EARTHING/MARSHALLING BUS BAR SHALL BE DEFINED BY VENDOR.
4. THE EARTHING BUS BAR INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5. FOR TYPICAL DETAILS PLEASE REFER DOCUMENT "123A90-DDL-EL-DD-20090-ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM".
6. DUE TO THE TOP CABLE ENTRIES THE EARTHING BUS BAR INSIDE THE CABINETS SHALL BE INSTALLED AT THE TOP OF THE CABINETS THEMSELVES.
7. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER DOCUMENT 123A90-DDL-EL-RE-20154.
8. ALL THE NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE SOUTH-WEST CORNER AT AN ELEVATION OF 2.5M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.5M.



EARTHING LAYOUT

"B-300" UPSs & BATTERIES SWITCHROOM

PLAN

EL.+ 23.310 T.O.S.

SYMBOL	DESCRIPTION
PE	EARTHING BUS
	EARTHING BAR TINNED COPPER WITH no.18 HOLES
--------	35sq.mm Y/G INSULATED COPPER CONDUCTOR FOR PE
PE	PROTECTIVE EARTH
■	EARTHING BOSS AISI316L
	JUMPER CONNECTION
▲ 01	FRONT OF EQUIPMENT

REFERENCE

DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT-UPSs & BATTERIES SWITCHROOM
1724000049-AR-DD-00020	B-300 DETAILED DRAWINGS – E&I SHELTERS

01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20138**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/05/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT – UPSs & BATTERIES SWITCHROOM
"B-300" UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:50

A3 | DRAWING NO. 123A90-DDL-EL-DL-20138 | SHEET 003 | REV. 01

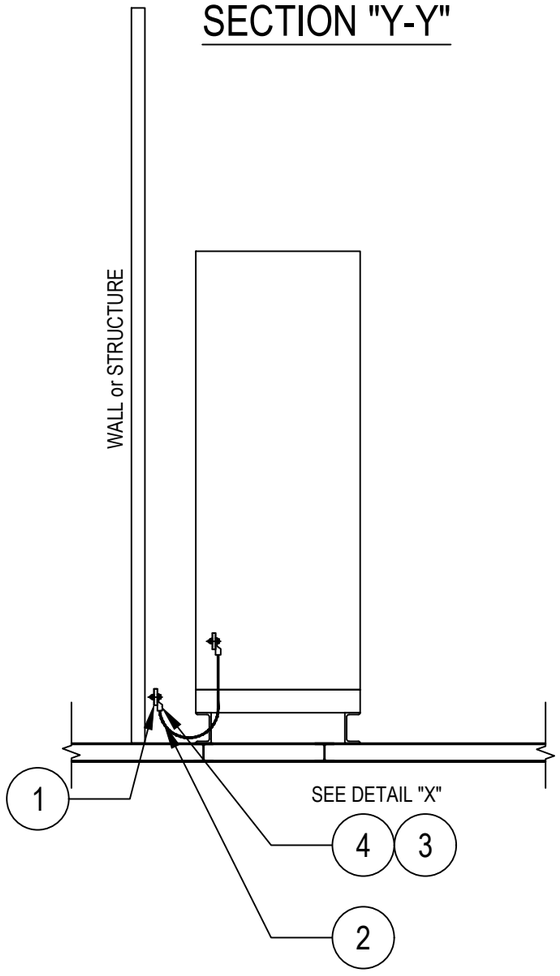
F.to UNI A3: 420mmx297mm

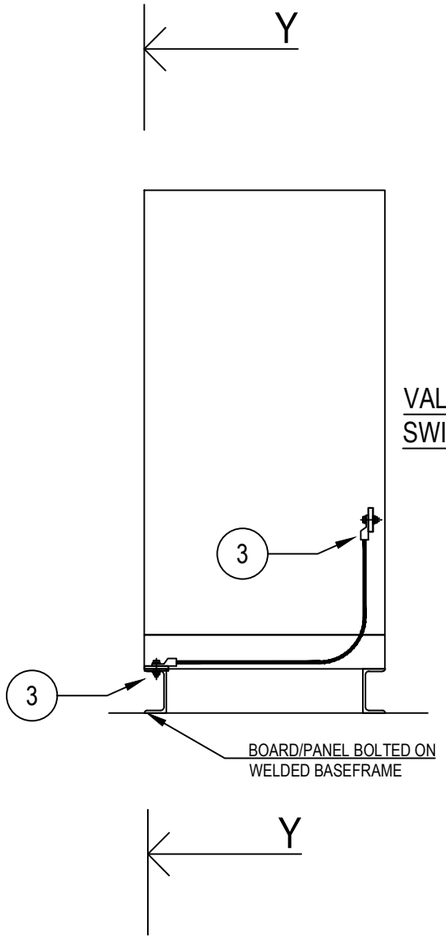
File Name : 123A90-DDL-EL-DL-20138 Rev. 01

E23

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	MARSHALLING EARTHING BAR	TINNED COPPER	50X5		NOTE 1
2	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm² SEE NOTE 1		NOTE 1
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm² SEE NOTE 1	4	NOTE 1
4	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	4	

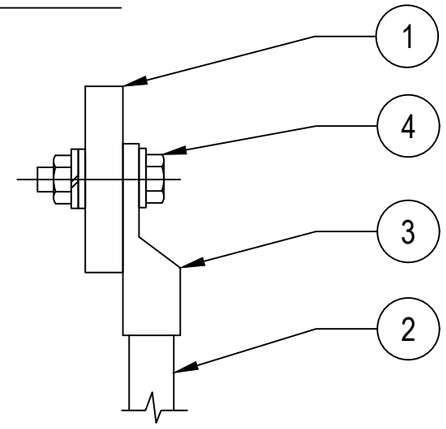
SECTION "Y-Y"





VALID FOR HV/LV SWITCHGEAR

DETAIL "X"



NOTES:

1) FOR SIZE OF THE EARTHING CABLE SEE ALSO EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_G	25/10/24	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 PANELS/BOARDS IN TECHNICAL ROOM

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	011	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

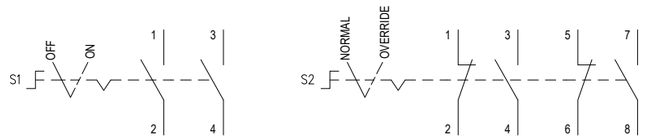
GENERAL NOTES:

-ENCLOSURE: EJBC-5
-MATERIAL: COPPER FREE ALUMINIUM ALLOY
-EXTERNAL PAINTING: RAL7035
-INTERNAL PAINTING: /
-ALL DIMENSION ARE IN mm
-WEIGHT: ≈57kg

BATTERY PROTECTION BOX

CB-200F3 A/B

SELECTOR SWITCHES DETAIL



TRUE TABLE

POSITION	CONTACT	
	1-2	3-4
OFF	O	O
ON	X	X

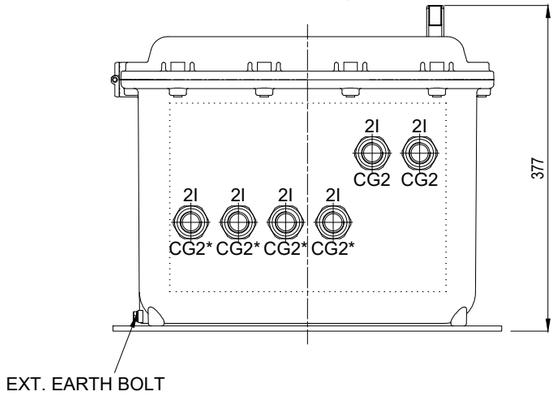
O	CONTACT OPEN
X	CONTACT CLOSED

TRUE TABLE

POSITION	CONTACT			
	1-2	3-4	5-6	7-8
NORMAL	X	O	X	O
OVERRIDE	O	X	O	X

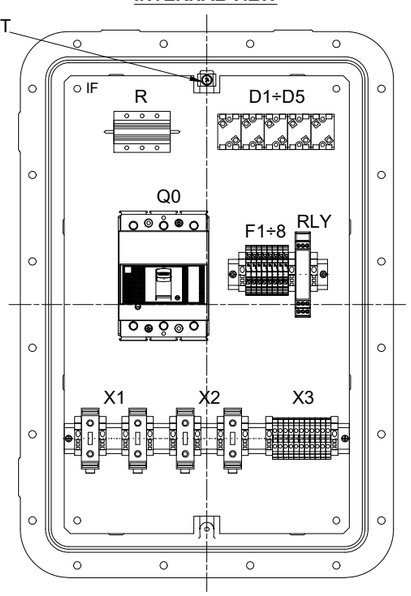
O	CONTACT OPEN
X	CONTACT CLOSED

BOTTOM VIEW
2I: N°6 ØM25x1,5 ISO



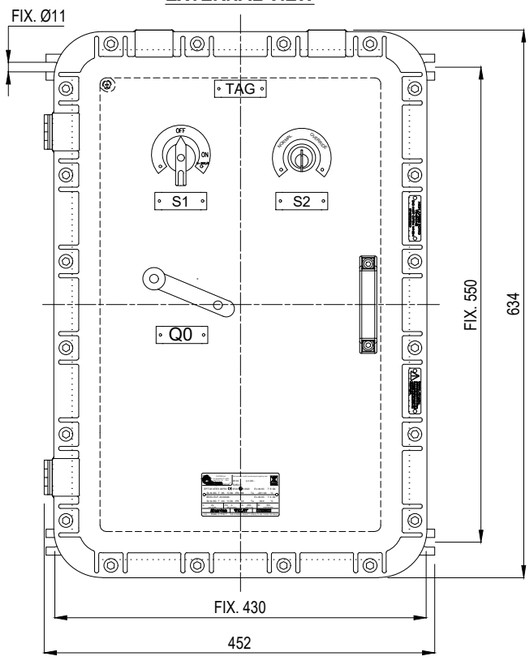
N°	Q.TY	CODE	DESCRIPTION
IF	1	BFE-5	ALUMINIUM INTERNAL FRAME
X1	2	UKH70	PHOENIX TERMINALS SUITABLE FOR 70mm² CABLE
X2	2	UKH70	PHOENIX TERMINALS SUITABLE FOR 70mm² CABLE
X3	11	UT4	PHOENIX TERMINALS SUITABLE FOR 4mm² CABLE
Q0	1	XT3N200TMD3	ABB XT3 MCCB, 3P, 200A, 36kA
	1	1SDA066399R1	220-240Vac/dc UNDERVOLTAGE RELEASE COIL
	2	1SDA066423R1	2NO AS PER TBE AUX CONTACTS FREE VOLTAGE
	1	M-0439/V1 + M-1044	PADLOCKABLE EXTERNAL HANDLE
F1,F2	2	UT4-HESI	PHOENIX FUSE HOLDER TERMINALS SUITABLE FOR 4mm² CABLE WITH 4A FUSE
	2	FUS5X20/4	
F3÷F8	6	UT4-HESI	PHOENIX FUSE HOLDER TERMINALS SUITABLE FOR 4mm² CABLE WITH 2,5A FUSE
	6	FUS5X20/2,5	
RLY	1	PHO2986575	PHOENIX SECURITY RELAY, 24Vcc, 3 EXCHANGE CONTACTS
R	1	RS1752429	47Ω RESISTOR, 95W, NOT ADJUSTABLE
D1÷D5	5	RS3959141	40A, 1000V, DIODES
S1	1	A2-10E/R	SELECTOR SWITCH, 2P, 16A, SCHEME I "OFF-ON"
	1	M-0553	EXTERNAL HANDLE
S2	1	WS2-10E/R	SELECTOR SWITCH, 4P, 16A, SCHEME 2Z "NORMAL-OVERRIDE"
	1	M-093/CF	KEY LOCK EXTERNAL HANDLE
CG2*	4	NEV25IB	NICKEL PLATED BRASS CABLE GLANDS ØM25 FOR ARMORED CABLE Øint. 11-20mm Øext. 20-27,5mm, ARMOR THICKNESS 0,2-1,6mm
CG2	2	NAV25IB	NICKEL PLATED BRASS CABLE GLANDS ØM25 FOR NOT-ARMORED CABLE Ø11-20mm

INTERNAL VIEW

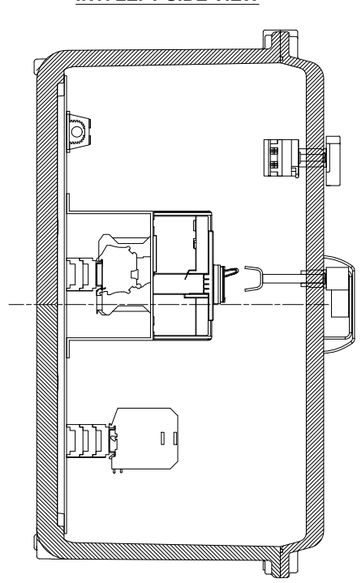


REMARK:
X1/X2 TERMINALS PLACES OVER THE ENTRY HOLES

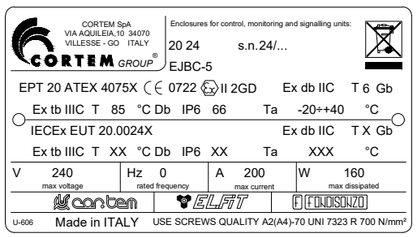
EXTERNAL VIEW



INT. LEFT SIDE VIEW



CERTIFICATE NAMEPLATE



TAG NAMEPLATE
MATERIAL: TRAPHOLITE
DIMENSIONS: 60X20
BLACK TEXT ON WHITE BACKGROUND

N°	TAG N°
TAG	CB-200F4 A
	CB-200F4 B
	CB-200F3 A
	CB-200F3 B
S1	S1
S2	S2
Q0	Q0

REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
1	24/05/2024	GRATTON	GIUSTI	GRATTON	MODIFIED AND REISSUED FOR APPROVAL
0	13/05/2024	BOGAR	GIUSTI	GRATTON	ISSUED FOR APPROVAL

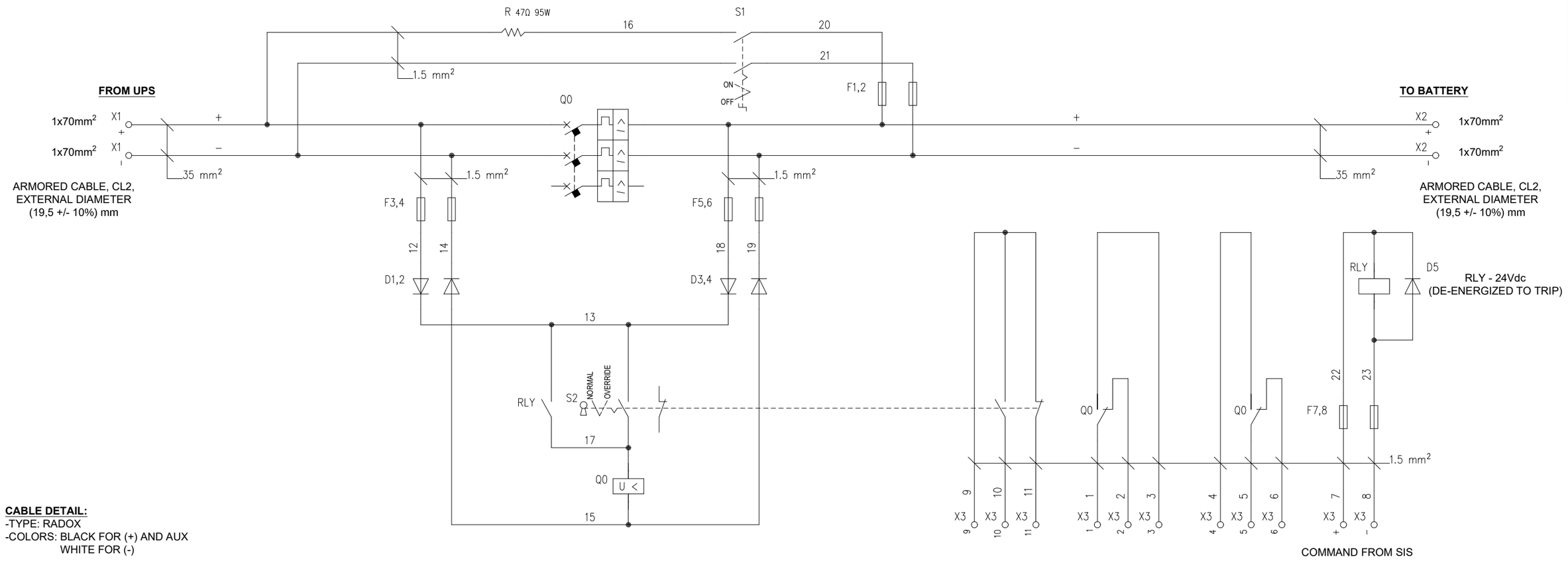
DRAWING TITLE: AC UPS - TAG: UP-200F3
001 EJBC-5/C2401778/10.
ITEM 10
EXT/INT. LAYOUT

CORTEM JOB: COV2401778
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27438
SHEET 1 NEXT 2 TOT. 4

CORTEM GROUP
contem
FONDISONZO
ELFIT

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Smart Professional R. 2012



CABLE DETAIL:
-TYPE: RADOX
-COLORS: BLACK FOR (+) AND AUX
WHITE FOR (-)

CIRCUIT	DESCRIPTION			F3,4		Q0		F5,6		F1,2						F7,8							
	NUMBER																						
	PHASE	POWER	kW	+ -		+ -		+ -		+ -						+ -							
SWITCH	MANUFACTURER					ABB																	
	TYPE					XT3N200TMD3																	
	POLE N.	In	A			3	200																
	Idn A	CURVE																					
	Pdi kA	JUNCTION BOX N°				36kA																	
FUSE	TYPE			FUS5X20				FUS5X20		FUS5X20						FUS5X20							
	CURRENT		A	2,5				2,5		4						2,5							
CONTACTOR	TYPE																						
	In A	Pn	kW																				
THERMAL RELAY	TYPE																						
	CURRENT		A																				
TERMINALS CABLES	TERMINAL TYPE											UT		UT		UT							
	TERMINAL SECTION		mm²									4		4		4							
	TERMINAL NUMBER																						
	CABLE SECTION		mm²																				

REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
1	24/05/2024	GRATTON	GIUSTI	GRATTON	MODIFIED AND REISSUED FOR APPROVAL
0	13/05/2024	BOGAR	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: AC UPS - TAG: UP-200F3

001 EJBC-5/C2401778/10.
ITEM 10
INTERNAL WIRING

CORTEM JOB: COV2401778
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27438
SHEET 2 NEXT 3
TOT. 4

CORTEM GROUP
contem
FONDISONZO
ELFIT

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AUTHORIZATION

Smart Professional R. 2012

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CAE EPLAN Electric P8

AUXILIARY
From Lighting & Small Power DB BOP DP-200N1
(Cubicle 03-Q41)
100-240V/N/PE~50/60Hz
back-up fuse gG10A 3G2.5mm2

LINE A
From LV Switchgear SG-200N1
(Cubicle A3/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

From LV Switchgear SG-200N1
(Cubicle A7/02)
Bypass mains 400V;3/PE~50Hz
gG63A 4G35mm2

LINE B
From LV Switchgear SG-200N1
(Cubicle A4/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

Not included in the AEG shipment

+MBC1
BY-200F3
Bypass transformer cabinet 40 kVA
1000007888.020
10009757

-X1 1U,1V,1W,PE
-X10 U,V,W,PE
-X13 U,N,PE
-X14 U,N
-X1 3U,3V,3W,PE
-A85
-H1
-Q10 L=80/65A I=0,8kA Icu=50kA
-T8 400V/400V 40kVA
-Q28.1 NC
-Q28.2 NC
-X1 2U,2V,2W,PE
-X4 1U,1V,1W,1N,PE
-X4 2U,2V,2W,2N,PE
-X1 4U,4V,4W,PE

+UPS1
BC-200F3A
Protect 8.33 40-400-210-400
1000007888.010
10009756

+UPS2
BC-200F3B
Protect 8.33 40-400-210-400
1000007888.010
10009756

-E1-X1 U,V,W,PE
-E4-X4 U,V,W,N,PE
-Q1 L=100/85A I=1,0kA Icu=50kA
-T40
-A1 REC
-A2 INV
-T1
-F1,-F2,-F3
-A18 Display
-A20 Parallel Adapter
INV CAN -X3 1-3 → 203 / 1.6
INV Sync -X5 1-4 → 205 / 1.6
-A3 SBS
-A4
-L11,-L12,-L13 Parallel preventive choke coil
-A24.1 BLÜ-PRO
-F91
-A12 ,-A13 Remote signaling
-E2-X2 L-,L+,PE
-X15 2,3
-X130 1,2
-E3-X3 U,V,W,N,PE
-X2 1L+,1L-,PE
-X91 1M
-X5 1U,1V,1W,1N,PE
-X5 2U,2V,2W,2N,PE
-Q71 NC
-Q72 NC
-Q29 1:INV operation 2:Manual bypass
-F25
DP-200F3
-QF31 B32A 300mA
-QF32 B32A ^^0mA
-QF33 B32A 300mA
-QF34 B16A 300mA
5pc
-QF38 B16A 300mA
-QF39 B10A 300mA
4pc
-QF42 B10A 300mA
-QF43 B10A
8pc
-QF50 B10A
-QF51 B6A
-QF52 B6A
-X2 2L+,2L-,PE
-X91 2M
-X31 U,N,PE
-X32 U,N,PE
-X33 U,N,PE
-X34 U,N,PE
-X38 V,N,PE
-X39 V,N,PE
-X42 W,N,PE
-X43 W,N,PE
-X50 U,N,PE
-X51 V,N,PE
-X52 V,N,PE
-X2 4L+,4L-,PE
-X91 4M
-X130 3,4,2PE
2(1x70 mm2)
+BFB1
CB-200F3A
Battery fuse box 200 A
*1
-Q2 L=200A
DC 24V max. 300W
+BAT1
BA-200F3A
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81
Not included in the AEG shipment
max. gG16A
Load
400/230V;3/N/PE~50Hz
+BFB2
CB-200F3B
Battery fuse box 200 A
+BAT2
BA-200F3B
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah

Code	Description
Q1	Rectifier input mains breaker
T40	Rectifier input isolation transformer
A1	Rectifier
A2	Inverter
T1	Inverter output isolation transformer
A3-A4	Static by-pass switch
A18	Display control module
A85	Heater
H1	Light

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors) attached.
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

*2 Connection cables are not included.

					Date	14.05.2024			
01	500900000053	13.08.2024	Bedoschäfer	Editor	EDC				
02	500900007089	27.08.2024	Bedoschäfer	Checked	Ch.Peck.				
Stat	Alteration	Date	Name	Norm					

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

System 40 kVA
Single-line diagram

1000007888_010 en

& FFA

A0 Sheet 1 Sheets 1

1000007888_010

S-701D Data Sheet for
AC Uninterruptible Power Systems (UPS) (IEC 62040-3)

JIP33 JOINT INDUSTRY PROGRAMME

Row							Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
5		**GENERAL**					
6	5.1.2	Vendor :	Input Data	AEG Power Solutions			
7	5.1.2	Order status :	for purchase	Noted			
8	5.1.2	Purchase order number, date :	1724000372 123A90A rev1 dated 22/4/2024	Noted			
9	5.1.2	Manufacturer :	Input Data	AEG Power Solutions			
10	5.1.2	Model number :	Input Data	2 x Protect 8.33 S10 40kVA			
11	5.1.2	Serial number :	Input Data	Released after production			
12	5.2.3	Application :	industrial	Noted			
13	5.3.3	Purchaser specified rated output power :	35	40kVA	kVA		
14	5.1.1	Quantity :	1	Confirmed. Redundant system			
15		Conformity assessment system (CAS) level :	D	Noted			
16		**CONFIGURATION**					
17	5.1.1, A.1, Figure A.2, Figure A.3A, Figure A.3B, Figure A.6	UPS configuration :	simplified parallel UPS with common bypass & common output-Figure A.3A	Confirmed			
18	5.1.1, B.1	UPS topology :	double conversion	Confirmed			
19	5.1.1	Static switch configuration :	in both inverter and bypass path	Confirmed			
20	5.4.2.3	Battery configuration :	2 x 50%	Confirmed. 15 min. autonomy each battery			
21	5.3.2, 5.3.4	Performance classification :	manufacturer to advise	-			
22	8.1.1.3	Bi-directional rectifier :	No	Not applicable			
23	8.4.2.11	Remote access required :	Yes (read only)	Confirmed. Modbus TCP			
24	8.4.2.11	Hardware (adapters, connectors, cables, etc.) required for remote access :	manufacturer to advise	Confirmed			
25	8.1.1.5, 8.1.1.6	On-line battery monitoring facility required :	string monitoring	Confirmed			
26	8.1.1.4	On-line battery testing feature required :	No	Noted			
27	8.1.1.4	Battery test load interface :	No	Noted			
28	5.4.2.3	DC earth leakage monitoring required :	No	Noted			
29	7.4.14	Single line diagram and status display :	on HMI	LCD display with synoptic			
30	8.1.2.11	Black start feature required :	Yes	Confirmed			
31	8.1.1.1	Earth screen required for isolation transformer :	manufacturer to advise	Confirmed on the by-pass isolation transformer			
32		**PHYSICAL ASPECTS**					
33	7.2.1	Mounting :	floor mounting	Confirmed			
34	7.2.1	Overall cabinet dimensions - length :	manufacturer to advise	900 + 600 + 900 mm	mm		
35	7.2.1	Overall cabinet dimensions - depth :	manufacturer to advise	860 mm	mm		
36	7.2.1	Overall cabinet dimensions - height :	manufacturer to advise	1915 mm	mm		
37	7.2.1	Reference outline drawing number :	Input Data	1724000372-EL-DA-00004			
38	7.2.1	Total UPS cabinet mass :	manufacturer to advise	2258 kg	kg		
39	7.2.1	Total UPS mass with batteries (if integrated) :	manufacturer to advise	Batteries not integrated	kg		
40	7.2.4, 7.2.5	Cable entry location :	top	Confirmed. Through by-pass cabinet by means of cable glands			
41	7.2.4, 7.2.5	Cable entry type :	removable - undrilled plate	Confirmed			
42	7.2.4, 7.2.5	Gland plate material :	manufacturer standard	Steel			
43	7.2.1	Paint colour :	supplier standard	RAL7035			
44	7.2.1	Canopy for cabinet required :	No	Noted			
45	7.3.9	Document holder :	Yes	Confirmed			
46		**INSTALLATION**					
47	4,1	Site :	offshore - fixed	Noted. Painting class C3-H			
48	4,1	Location of UPS cabinet installation :	indoor	Noted			
49	7.3.1, 7.3.2	Front access clearance dimensions for operation and maintenance :	800	Noted	mm		
50	7.3.2	Side clearance for ventilation (if required) :	manufacturer to advise	0	mm		
51	7.3.2	Rear clearance for ventilation (if required) :	manufacturer to advise	100 mm	mm		
52	7.2.3, 7.9.3	Installed location of battery :	inside UPS room	Battery housed on rack			
53	7.2.3	Maximum battery assembly dimensions (L x D x H):	manufacturer to advise	Battery rack 1050 x 725 x 1032	mm		
54		**SAFETY**					
55	5.1.1	Accessibility :	operator access area	Front access			
56	5.1.1	Key required for cabinet :	Yes	Confirmed			
57	7.2.2	Degree of protection (with closed doors) :	IP31	IP43			
58	7.2.2	Degree of protection (with open doors) :	IP2X	Confirmed			
59	7.7.5	Cooling fan replacement while UPS in service :	No	Noted			
60	5.1.2	Local language for caution/danger/warning labels :	English	Confirmed			
61		**ELECTROMAGNETIC COMPATIBLITY**					
62	5.1.4	Emission :	UPS Cat C3	Confirmed			
63	5.1.4	Immunity :	UPS Cat C3	Confirmed			
64		**ENVIRONMENTAL CONDITIONS**					
65	4.2.1.1	Minimum ambient temperature (operation) :	-8,4	Confirmed with heater option included	°C		
66	4.2.1.1	Maximum ambient temperature (operation) :	40	Confirmed	°C		
67	4.2.1.1	Maximum relative humidity (operation) :	95	Confirmed. Not condensing	%		
68	4.2.1.1	Temperature at which relative humidity is specified (operation) :	Input Data	-	°C		
69	4.2.1.2	Maximum altitude (operation) :	Sea level	Noted	m		
70	4.2.2.1	Minimum ambient temperature (storage and transportation) :	-5	Noted	°C		
71	4.2.2.1	Maximum ambient temperature (storage and transportation) :	40	Noted	°C		
72	4.2.2.1	Maximum relative humidity (storage and transportation) :	95	Noted	%		
73	4.2.2.1	Temperature at which relative humidity is specified (storage and transportation) :	Input Data	-	°C		
74	4.3.2	Seismic requirement data :	Zone 2	Noted			
75	4.2.2.1	Storage site of UPS :	indoor – natural ventilation	Noted			
76	4.3.2	Additional or unusual conditions (operation) :	Input Data	Not applicable			
77	4.3.3	Additional or unusual conditions (storage and transportation) :	Input Data	Not applicable			
78	5.1.5	Acoustic noise at 1 m - normal mode :	70	< 65 dB(A)	dBA		
79	5.1.5	Acoustic noise at 1 m - stored energy mode :	70	< 65 dB(A)	dBA		
80		**COMMUNICATION INTERFACE(S)**					
81	5,6	(1) Interface media for SCADA (ICSS / DCS) :	serial	Modbus TCP + relays			
82	5,6	(1) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
83	5,6	(1) Interface protocol for SCADA (ICSS / DCS) :	Modbus	Modbus TCP + relays			
84	5,6	(2) Interface media for electrical management / control system :	serial	Modbus TCP + relays			
85	5,6	(2) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
86	5,6	(2) Interface protocol for electrical management / control system :	Modbus	Modbus TCP + relays			
87	5,6	(3) Remote access / monitoring software required:	Yes	Noted			
88	5,6	(3) Interface media for remote access / monitoring:	ethernet (fiber)	Noted			
89	5,6	(3) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
90	5,6	(3) Interface protocol for remote access / monitoring :	Modbus	Modbus TCP + relays			
91		**AC INPUT SPECIFICATIONS**					
92	5.2.1	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
93	5.2.1	Voltage (steady state, R.M.S) - tolerance :	+/- 10	Confirmed	%		
94	5.2.1	Frequency - rated :	50 Hz	Confirmed			
95	5.2.1	Frequency - tolerance :	+/- 2	Confirmed	%		
96	5.2.2	Phases required :	3	3			
97	5.2.2	Neutral required :	Yes	Confirmed. Neutral not required for the rectifier supply			
98	5.2.2	Current (R.M.S) - rated (with the energy storage device charged) :	manufacturer to advise	71,2A	A		
99	5.2.2	Power factor :	manufacturer to advise	Data not characterized by the factory. Measurable on request			
100	5.2.2	In-rush (% of rated current) :	manufacturer to advise	Typically 10 x In	%		
101	5.2.2	In-rush (time) :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
102	5.2.2	Maximum current (with low input volt and energy storage device charging) :	manufacturer to advise	92A at 400Vac	A		
103	5.2.2	Time for overload (125 % of rated current) :	10	Confirmed	min		
104	5.2.2	Time for overload (150 % of rated current) :	1	Confirmed	min		
105	5.2.2	Total harmonic distortion - current (THD p.u.) :	8	Confirmed. The AC UPS works with an input voltage harmonic distortion ≤ 8%	%		
106	5.2.3	Short circuit current of the input supply (Minimum and Maximum) :	50	Confirmed. The charger is equipped with an input MCCB (Q1) with Isc = 50kA	kA		
107	5.2.2	Minimum short circuit current :	Input Data	Data not characterized by the factory. Measurable on request	kA		
108	5.2.2	Earth leakage current :	Input Data	Data not characterized by the factory. Measurable on request	mA		
109	5.2.2	AC power distribution system - compatibility :	TN-S	Confirmed			
110	5.2.3	Additional or unusual conditions :	Input Data	Not applicable			
111	5.2.3, 7.5.4	Cable size (cross-section area) - input mains :	Input Data	min 50 sqmm - max 2x95 sqmm	sq.mm.		
112	5.2.3, 7.5.4	Cable size (cross-section area) - input bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
113	5.2.3, 7.5.4	Cable size (cross-section area) - input maintenance bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
114	7.4.8, 8.1.1.1	Input isolation transformer required :	Yes	Confirmed			
115	7.4.10	Input isolation transformer winding :	supplier standard	Aluminium			
116		**DC AND BATTERY SPECIFICATIONS**					
117	5.4.2.2	DC voltage level :	220	Confirmed	V d.c.		
118	5.4.2.2	Design life :	5	> 12 years	years		
119	5.4.2.2	Float service life :	manufacturer to advise	Dependent from temperature	years		
120	5.4.2.2	Shelf life of battery :	manufacturer to advise	3 months	months		
121	5.4.2.2	Quantity of cells and strings :	manufacturer to advise	18 blocks - 1 string	nos.		
122	5.4.2.2	Nominal voltage (total) :	manufacturer to advise	216V	V d.c.		
123	5.4.2.2	Battery technology :	sealed nickel cadmium	Lead-Acid VRLA GEL			
124	5.4.2.2	Nominal AH capacity :	manufacturer to advise	150Ah	AH		
125	5.4.2.2	Discharge rate (C-rate) :	Select	C20			
126	5.4.2.2	Electrolyte fill status :	manufacturer standard	Not applicable			
127	8.1.2.3	Purchaser's requirement (% of battery recharge level - 1) :	80	Confirmed with charging current limited to 0,1C	%		
128	8.1.2.3	Purchaser's requirement (time for battery recharge level - 1) :	10	Confirmed	Hours		
129	8.1.2.3	Purchaser's requirement (% of battery recharge level - 2) :	100	Data not characterized by the factory. Measurable on request	%		
130	8.1.2.3	Purchaser's requirement (time for battery recharge level - 2) :	24	Data not characterized by the factory. Measurable on request	Hours		
131	5.4.2.2	Stored energy time (Autonomy time at 100% rated load) :	30	Confirmed with both batteries	min		
132	5.4.2.2	Restored energy time (recharge time to 80% capacity):	manufacturer to advise	10h	hours		
133	5.4.2.2	Ambient reference temperature :	40	Confirmed	°C		
134	5.4.2.2	Earth condition/isolation :	manufacturer to advise	floating			
135	5.4.2.2	Ripple current (R.M.S) :	manufacturer to advise	< 2% RMS	%		
136	5.4.2.2	Nominal discharge current (stored energy mode):	manufacturer to advise	-	A		
137	5.4.2.2	DC Fault current rating :	manufacturer to advise	Data not characterized by the factory. Measurable on request	A d.c.		
138	5.4.2.2	Cable volt drop recommendation (≤ % at nominal discharge current) :	manufacturer to advise	2%	%		
139	5.4.2.2	Charging regime :	manufacturer to advise	Constant voltage, current limited			
140	5.4.2.2	Charge voltage (float) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
141	5.4.2.2	Charge voltage (boost) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
142	5.4.2.2	Charge voltage (equalising) and tolerance band :	manufacturer to advise	Not applicable to VRLA batteries	V d.c.		
143	5.4.2.2	Minimum end of discharge voltage :	manufacturer to advise	178,2V	V d.c.		
144	5.4.2.2	Charge current limit (or range) :	limitation of batteries charging to 30% of the UPS sizing	15A (0,1C)	A d.c.		
145	5.4.2.2	Temperature compensated charging required:	Yes	Confirmed			
146	5.4.2.3	Battery isolation box required :	Yes	Confirmed			
147	5.4.2.3	Additional or unusual conditions :	Input Data	Not applicable			
148	5.4.2.3	Load profile for battery design, attached :	No	Noted			
150		**BATTERY ROOM**					
151	4.2.1.1	Minimum ambient reference temperature :	-8,4	-8,4°C (used for battery sizing)	°C		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
152	4.2.1.1	Maximum ambient reference temperature :	40	+40°C (used for battery sizing)	°C		
153	5.4.2.1	Area classification :	safe	Noted			
154	5.4.2.1	Hazardous area classification :	Zone 2	Noted			
155	5.4.2.1	Minimum gas subdivision and temperature class (for equipment in battery room) :	Select	-			
156	8.1.2.10	Temperature sensor (for VRLA / partial gas recombination batteries) :	Yes	Confirmed. Standard sensor			
157		**BATTERY ISOLATOR BOX SPECIFICATIONS**					
158	7.9.1	Enclosure material :	manufacturer standard	Aluminium alloy			
159	7.9.1	Mounting :	Select	Wall mounting			
160	7.9.1	Breathing valve required :	manufacturer to advise	No			
161	7.9.1	Internal earth bar :	tinned copper	-			
162	7.9.3	Minimum design temperature :	-8,4	Noted	°C		
163	7.9.3	Maximum design temperature :	40	Noted	°C		
164	7.9.3	Maximum relative humidity :	95	Noted	%		
165	7.9.3	Temperature at which relative humidity is specified:	Input Data	-	°C		
166	7.9.4	Degree of protection :	IP 31	IP65			
167	7.9.5	Area classification :	safe	Noted			
168	7.9.5	Hazardous area certification required :	none	-			
169	7.9.5	Hazardous area classification :	N/A	Not applicable			
170	7.9.5	Hazardous area level of protection :	N/A	Not applicable			
171	7.9.6	Cable entry :	top	Bottom with cable glands			
172	7.9.6	Cable indirect entry via 'ex e' enclosure :	No	Not applicable			
173	7.9.6	Battery cable size (cross-section area) :	Input Data	70 sqmm armored cable class-2	sq.mm.		
174	7.9.6	Cable entry diameter in battery box (ISO metric) :	Input Data	22,6 mm			
175	7.9.7	Battery isolator type :	MCCB	Confirmed			
176	7.9.8	Rated current of breaker / switch fuse unit :	manufacturer to advise	200A	A		
177	7.9.8	Rated breaking current (Icu) - (if breaker used) :	manufacturer to advise	36kA	kA		
178	7.9.10	Breaker status potential free contact (NO) :	two	Confirmed			
179	7.9.9	Under voltage trip feature required :	Yes	Confirmed			
180	7.9.9	Under voltage trip coil for :	black start reserve	Confirmed			
181	8.1.2.12	ESD trip required :	Yes - via shunt trip	Yes - through SIL relay			
182	8.1.2.12	ESD override key switch :	key captive in overridden position and with status contact	Confirmed			
183	7.9.9	Over voltage trip required :	Yes	Not applicable			
184		**AC OUTPUT SPECIFICATIONS**					
185	5.3.2	Rated output power (apparent) :	35	40kVA	kVA		
186	5.3.2	Rated output power (active) :	28	32kW	kW		
187	5.3.2	AC power distribution system - compatibility :	TN-S	Noted			
188	5.3.2	Phases available :	3	Confirmed			
189	5.3.2	Neutral available :	Yes	Confirmed			
190	5.3.2	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
191	5.3.2	Voltage - normal mode variation :	manufacturer to advise	+/- 1%	%		
192	5.3.2	Voltage - storage energy mode variation :	manufacturer to advise	+/- 1%	%		
193	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - linear :	5	< 3%	%		
194	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - non linear :	5	Confirmed	%		
195	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - linear :	5	< 3%	%		
196	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - non linear :	5	Confirmed	%		
197	5.3.2	% Voltage unbalance, 100% load unbalance :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
198	5.3.2	Phase angle displacement, 100% load unbalance:	manufacturer to advise	Data not characterized by the factory. Measurable on request	°		
199	5.3.2	% Voltage transient, 100% step load - linear :	manufacturer to advise	+/- 2%	%		
200	5.3.2	Voltage transient recovery time, 100% step load - linear :	manufacturer to advise	2 ms	s		
201	5.3.2	% Voltage transient, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
202	5.3.2	Voltage transient recovery time, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
203	5.3.2	% Voltage transient, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
204	5.3.2	Voltage transient recovery time, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
205	5.3.2	% Voltage transient, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
206	5.3.2	Voltage transient recovery time, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
207	5.3.2	Frequency (steady state) - rated :	50	Confirmed	Hz		
208	5.3.2	Frequency (steady state) - normal mode variation:	2	+/- 0,1%	%		
209	5.3.2	Frequency (steady state) - storage energy mode variation :	2	+/- 0,1%	%		
210	5.3.2	Frequency (steady state) - free running variation:	2	+/- 0,1%	%		
211	5.3.2	Synchronization (maximum ± % range of rated frequency) :	manufacturer to advise	-	%		
212	5.3.2	Maximum synchronism phase error (referred to 360° cycle) :	manufacturer to advise	-	%		
213	5.3.2	Maximum slew rate :	manufacturer to advise	-	Hz/s		
214	5.3.2	Current (R.M.S) - rated :	manufacturer to advise	58A	A		
215	5.1.8.1, 5.3.2	Current (R.M.S) - overload capability (% of rated current for ten minutes) :	manufacturer to advise	125%	%		
216	5.1.8.2, 5.3.2	Current (R.M.S) - overload capability (% of rated current for one minute) :	manufacturer to advise	150%	%		
217	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (% of rated current) :	manufacturer to advise	3,68 x In (1ph) - 2,02 x In (3ph)	%		
218	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (time duration) :	manufacturer to advise	500 ms	s		
219	5.3.2	Current (R.M.S) - limitation (% of rated current) :	manufacturer to advise	-	%		
220	5.3.2	Current (R.M.S) - limitation (time duration) :	manufacturer to advise	-	s		

Row	S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)						Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
221	5.3.2	Current (R.M.S) - fault clearing capability (normal mode) :	manufacturer to advise	-	A		
222	5.3.2	Current (R.M.S) - fault clearing capability (stored energy mode) :	manufacturer to advise	-	A		
223	5.3.2	Load power factor - rated :	manufacturer to advise	0,8			
224	5.3.2	Load power factor - displacement (permissible limit lead) :	manufacturer to advise	Cap - 1 - Ind			
225	5.3.2	Load power factor - displacement (permissible limit lag) :	manufacturer to advise	Cap - 1 - Ind			
226	5.3.2	Efficiency in normal mode - 100% load :	manufacturer to advise	86,4%	%		
227	5.3.2	Efficiency in normal mode - 75% load :	manufacturer to advise	87,3%	%		
228	5.3.2	Efficiency in normal mode - 50% load :	manufacturer to advise	87,2%	%		
229	5.3.2	Efficiency in normal mode - 25% load :	manufacturer to advise	83,8%	%		
230	7.4.8	Output isolation transformer required :	No	Yes. Output transformer is included in AEG standard design			
231	7.4.10	Output isolation transformer winding :	Select	Aluminium			
232	7.6.5	AC output neutral earth link :	earthed	Noted. Externally			
233	7.1.6	Reference document to AC output distribution board :	To see Electrical Load List	Noted			
234	5.3.3	Integrated AC output distribution board with MCBs:	Yes	Confirmed			
235	5.3.3	Cable size (cross-section area) - output:	manufacturer to advise	min 16 sqmm - max 2x95 sqmm	sq.mm.		
236		**BYPASS SPECIFICATIONS**					
237	C.3	Bypass transfer time :	manufacturer to advise	0	msec		
238	C.3	Bypass static switch rated current :	manufacturer to advise	40kVA - 58A	A		
239	C.3	Bypass protection fuse or circuit breaker rating :	manufacturer to advise	MCCB 65A	A		
240	7.4.8	Bypass transformer required :	Yes	Confirmed			
241	7.4.10	Bypass transformer winding :	copper or aluminum	Aluminium			
242	7.3.5	Maintenance bypass and bypass transformer location:	integrated	Manual by-pass integrated			
243	8.3.6, C.5	Overall maintenance bypass :	internal	Q29 manual by-pass integrated			

ITEM	Tag	CB-200F3B	: Isolator Battery Box for AC UPS 35 kVA		Dwg	123A90-DDL-EL-DS-20032	
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)		Module	LD_B-300	
TASK	code	C10000856	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX00	Miscellaneous Electrical Equipment

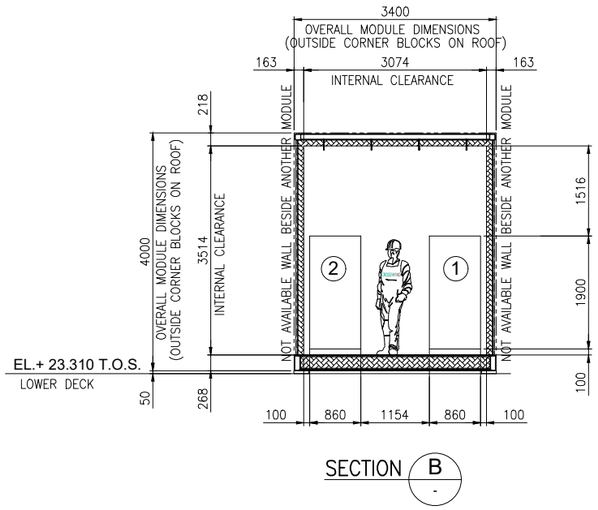
1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	OK
4	Check nameplate data is correct.	OK
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	PL
8	Check items are properly fixed on support.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

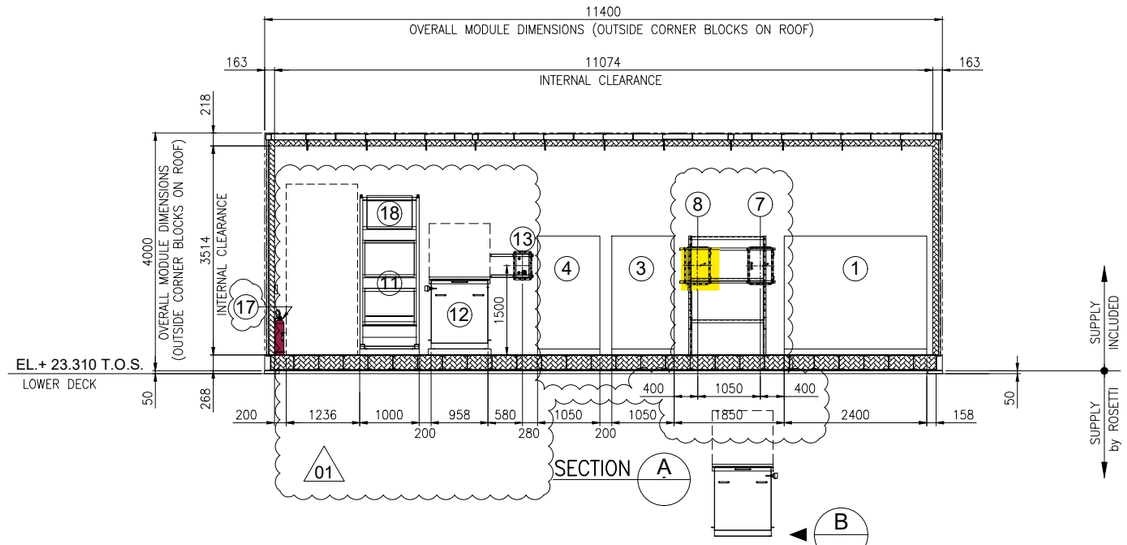
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-29T16:03:26.380Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:50:30.459Z	

DRAWING NO. 123A90-DDL-EL-DL-20106

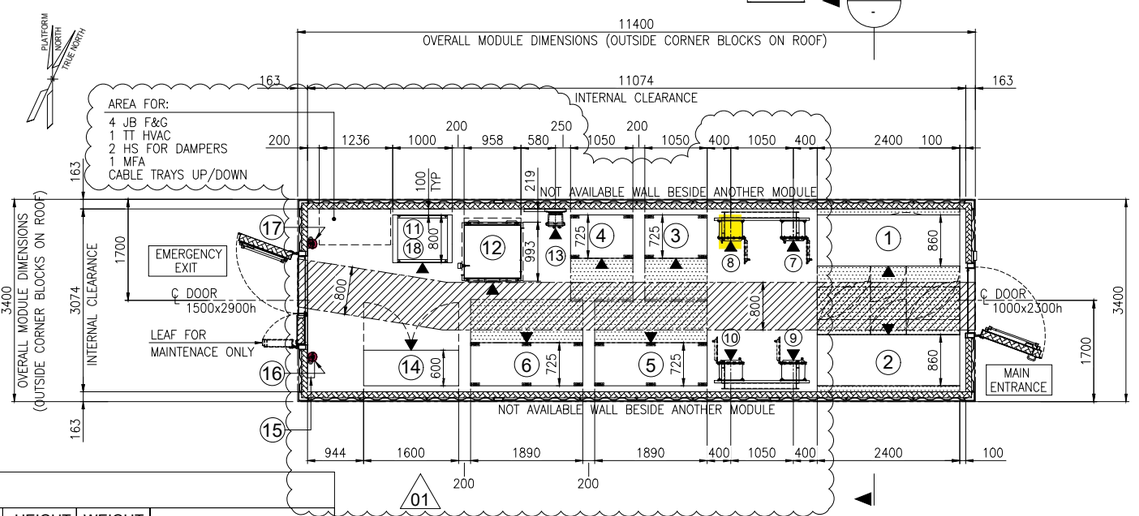
REV. 01



SECTION B -



SECTION A -



A -

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

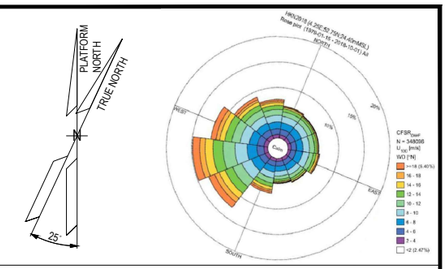
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA 01	450	341	632	100	
11	NC-200F2	NAVAID PANEL	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

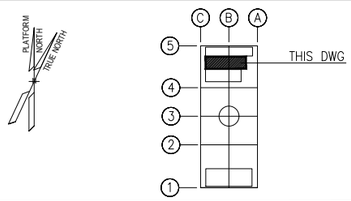
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

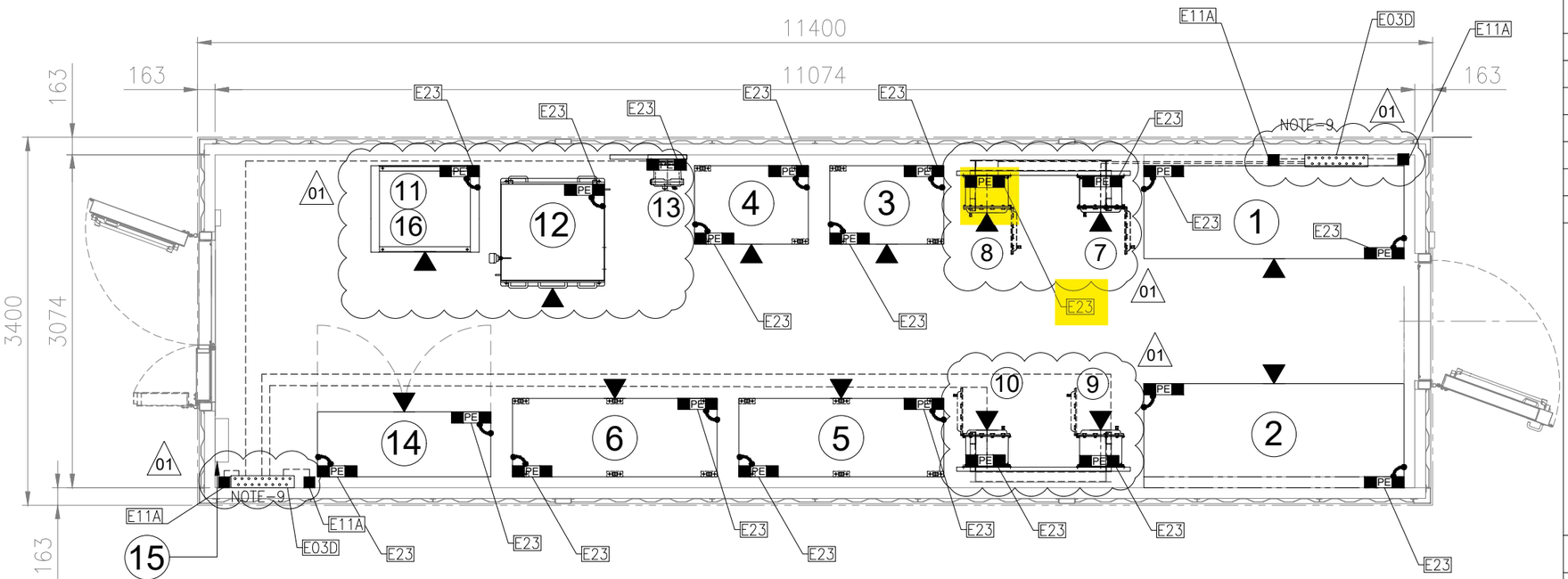
PLATFORM NORTH
TRUE NORTH

EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	UP-200F3	AC UPS 35kVA
2	UP-200F4	AC UPS 15kVA
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA
11	NC-200F2_BC-200F2A/B	NAVAID PANEL
12	BA-200F2	BATTERY BOX NAVAID
13	CB-200F2	ISOLATOR BOX NAVAID
14	B300-HSB-001	DISTRIBUTION & HVAC PANEL – AC/UPS ROOM
15	–	EYE WASH STATION
16	BC-200F2	BATTERY CHARGER NAVAID

01 (rows 11, 12, 13)
01 (rows 15, 16)

NOTES

1. THIS DOUCMENT IS VALID ONLY FOR EARTHING LAYOUT.
2. THE CABLE SIZE SHALL BE CONFIRMED.
3. THE EXACT POSITION OF EARTHING/MARSHALLING BUS BAR SHALL BE DEFINED BY VENDOR.
4. THE EARTHING BUS BAR INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5. FOR TYPICAL DETAILS PLEASE REFER DOCUMENT "123A90-DDL-EL-DD-20090-ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM".
6. DUE TO THE TOP CABLE ENTRIES THE EARTHING BUS BAR INSIDE THE CABINETS SHALL BE INSTALLED AT THE TOP OF THE CABINETS THEMSELVES.
7. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER DOCUMENT 123A90-DDL-EL-RE-20154.
8. ALL THE NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE SOUTH-WEST CORNER AT AN ELEVATION OF 2.5M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.5M.



EARTHING LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
PLAN
EL.+ 23.310 T.O.S.

SYMBOL	DESCRIPTION
PE	EARTHING BUS
	EARTHING BAR TINNED COPPER WITH no.18 HOLES
--------	35sq.mm Y/G INSULATED COPPER CONDUCTOR FOR PE
PE	PROTECTIVE EARTH
■	EARTHING BOSS AISI316L
	JUMPER CONNECTION
	FRONT OF EQUIPMENT 01

REFERENCE

DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT-UPSs & BATTERIES SWITCHROOM
1724000049-AR-DD-00020	B-300 DETAILED DRAWINGS – E&I SHELTERS

01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20138**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/05/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT – UPSs & BATTERIES SWITCHROOM
"B-300" UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:50

A3 | DRAWING NO. 123A90-DDL-EL-DL-20138 | SHEET 003 | REV. 01

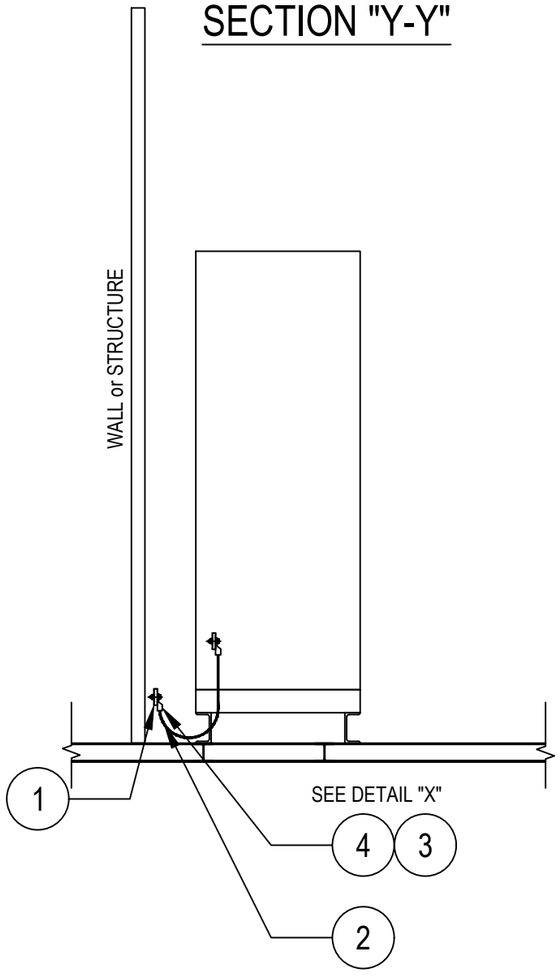
F.to UNI A3: 420mmx297mm

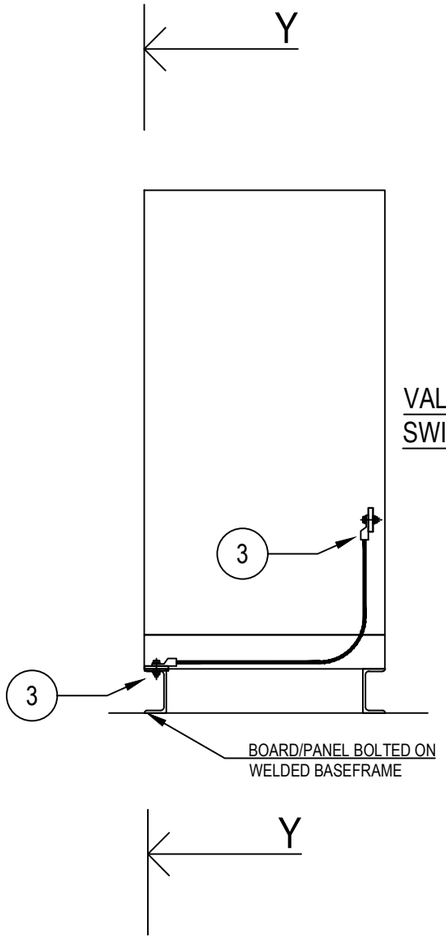
File Name : 123A90-DDL-EL-DL-20138 Rev. 01

E23

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	MARSHALLING EARTHING BAR	TINNED COPPER	50X5		NOTE 1
2	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm² SEE NOTE 1		NOTE 1
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm² SEE NOTE 1	4	NOTE 1
4	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	4	

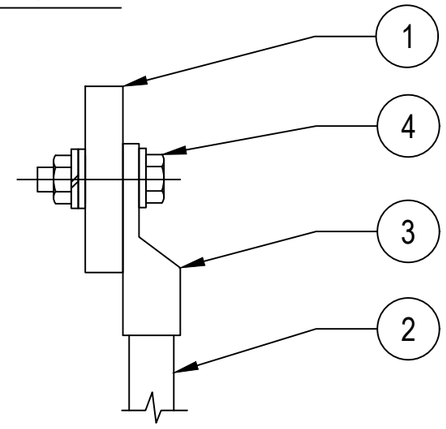
SECTION "Y-Y"





VALID FOR HV/LV SWITCHGEAR

DETAIL "X"



NOTES:

1) FOR SIZE OF THE EARTHING CABLE SEE ALSO EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_G	25/10/24	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 PANELS/BOARDS IN TECHNICAL ROOM

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	011	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

MODEL C-225 REV.1

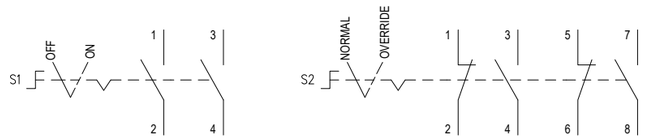
GENERAL NOTES:

-ENCLOSURE: EJBC-5
-MATERIAL: COPPER FREE ALUMINIUM ALLOY
-EXTERNAL PAINTING: RAL7035
-INTERNAL PAINTING: /
-ALL DIMENSION ARE IN mm
-WEIGHT: ≈57kg

BATTERY PROTECTION BOX

CB-200F3 A/B

SELECTOR SWITCHES DETAIL



TRUE TABLE

POSITION	CONTACT	
	1-2	3-4
OFF	O	O
ON	X	X

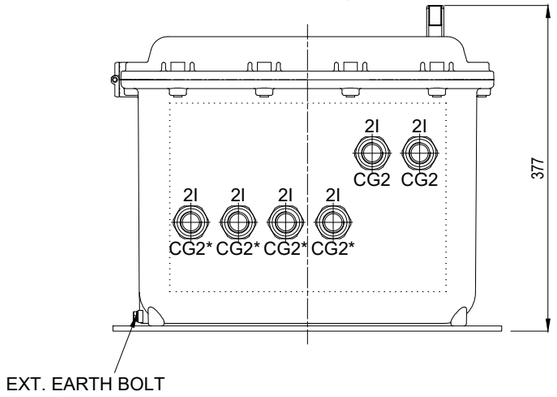
O	CONTACT OPEN
X	CONTACT CLOSED

TRUE TABLE

POSITION	CONTACT			
	1-2	3-4	5-6	7-8
NORMAL	X	O	X	O
OVERRIDE	O	X	O	X

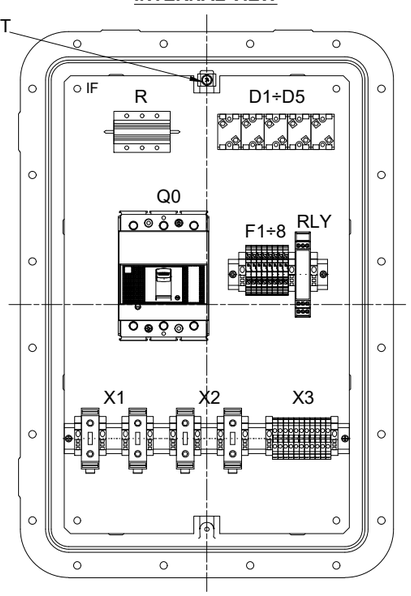
O	CONTACT OPEN
X	CONTACT CLOSED

BOTTOM VIEW
2I: N°6 ØM25x1,5 ISO



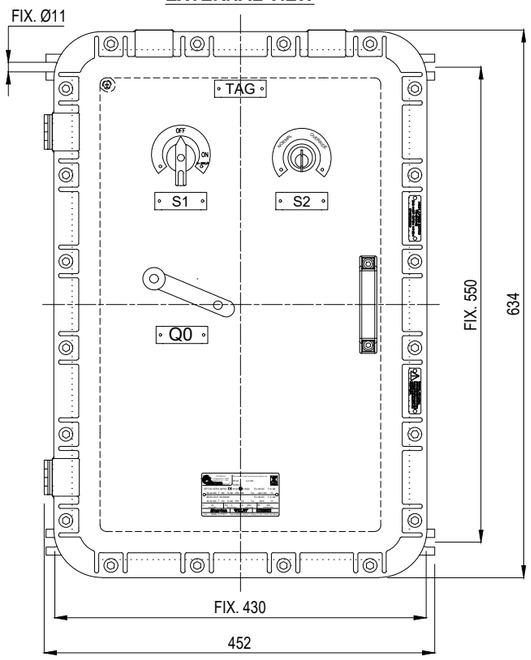
N°	Q.TY	CODE	DESCRIPTION
IF	1	BFE-5	ALUMINIUM INTERNAL FRAME
X1	2	UKH70	PHOENIX TERMINALS SUITABLE FOR 70mm² CABLE
X2	2	UKH70	PHOENIX TERMINALS SUITABLE FOR 70mm² CABLE
X3	11	UT4	PHOENIX TERMINALS SUITABLE FOR 4mm² CABLE
Q0	1	XT3N200TMD3	ABB XT3 MCCB, 3P, 200A, 36kA
	1	1SDA066399R1	220-240Vac/dc UNDERVOLTAGE RELEASE COIL
	2	1SDA066423R1	2NO AS PER TBE AUX CONTACTS FREE VOLTAGE
	1	M-0439/V1 + M-1044	PADLOCKABLE EXTERNAL HANDLE
F1,F2	2	UT4-HESI	PHOENIX FUSE HOLDER TERMINALS SUITABLE FOR 4mm² CABLE WITH 4A FUSE
	2	FUS5X20/4	
F3÷F8	6	UT4-HESI	PHOENIX FUSE HOLDER TERMINALS SUITABLE FOR 4mm² CABLE WITH 2,5A FUSE
	6	FUS5X20/2,5	
RLY	1	PHO2986575	PHOENIX SECURITY RELAY, 24Vcc, 3 EXCHANGE CONTACTS
R	1	RS1752429	47Ω RESISTOR, 95W, NOT ADJUSTABLE
D1÷D5	5	RS3959141	40A, 1000V, DIODES
S1	1	A2-10E/R	SELECTOR SWITCH, 2P, 16A, SCHEME I "OFF-ON"
	1	M-0553	EXTERNAL HANDLE
S2	1	WS2-10E/R	SELECTOR SWITCH, 4P, 16A, SCHEME 2Z "NORMAL-OVERRIDE"
	1	M-093/CF	KEY LOCK EXTERNAL HANDLE
CG2*	4	NEV25IB	NICKEL PLATED BRASS CABLE GLANDS ØM25 FOR ARMORED CABLE Øint. 11-20mm Øext. 20-27,5mm, ARMOR THICKNESS 0,2-1,6mm
CG2	2	NAV25IB	NICKEL PLATED BRASS CABLE GLANDS ØM25 FOR NOT-ARMORED CABLE Ø11-20mm

INTERNAL VIEW

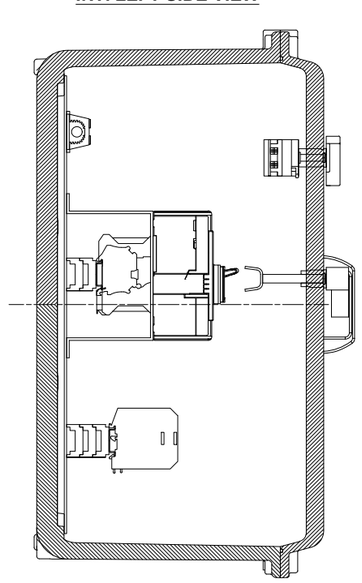


REMARK:
X1/X2 TERMINALS PLACES OVER THE ENTRY HOLES

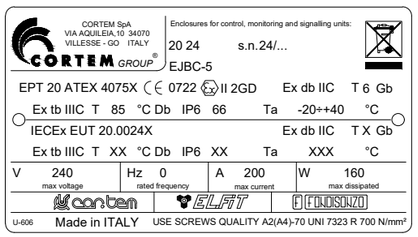
EXTERNAL VIEW



INT. LEFT SIDE VIEW



CERTIFICATE NAMEPLATE



TAG NAMEPLATE
MATERIAL: TRAPHOLITE
DIMENSIONS: 60X20
BLACK TEXT ON WHITE BACKGROUND

N°	TAG N°
TAG	CB-200F4 A
	CB-200F4 B
	CB-200F3 A
	CB-200F3 B
S1	S1
S2	S2
Q0	Q0

REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
1	24/05/2024	GRATTON	GIUSTI	GRATTON	MODIFIED AND REISSUED FOR APPROVAL
0	13/05/2024	BOGAR	GIUSTI	GRATTON	ISSUED FOR APPROVAL

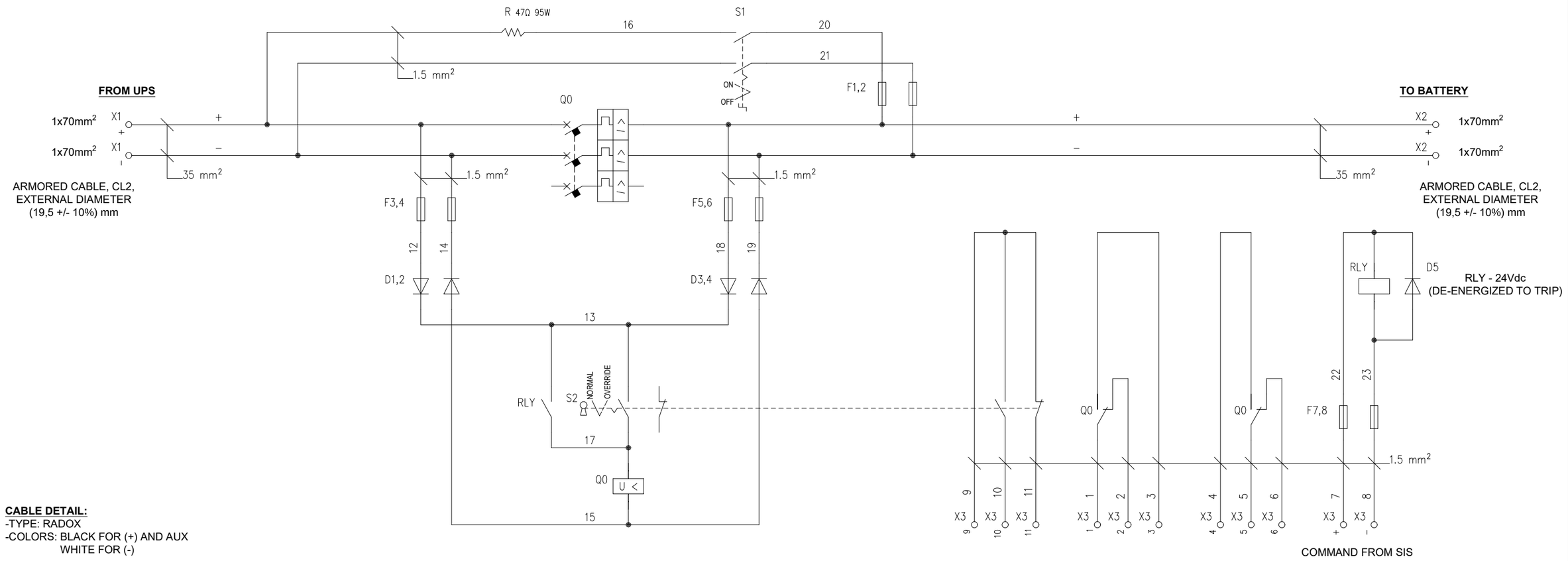
DRAWING TITLE: AC UPS - TAG: UP-200F3
001 EJBC-5/C2401778/10.
ITEM 10
EXT/INT. LAYOUT

CORTEM JOB: COV2401778
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27438
SHEET 1 NEXT 2 TOT. 4

CORTEM GROUP
contem
FONDISONZO
ELFIT

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CABLE DETAIL:
-TYPE: RADOX
-COLORS: BLACK FOR (+) AND AUX
WHITE FOR (-)

CIRCUIT	DESCRIPTION			F3,4		Q0		F5,6		F1,2						F7,8							
	NUMBER																						
	PHASE	POWER	kW	+ -		+ -		+ -		+ -						+ -							
SWITCH	MANUFACTURER					ABB																	
	TYPE					XT3N200TMD3																	
	POLE N.	In	A			3	200																
	Idn A	CURVE																					
	Pdi kA	JUNCTION BOX N°				36kA																	
FUSE	TYPE			FUS5X20				FUS5X20		FUS5X20						FUS5X20							
	CURRENT		A	2,5				2,5		4						2,5							
CONTACTOR	TYPE																						
	In A	Pn	kW																				
THERMAL RELAY	TYPE																						
	CURRENT		A																				
TERMINALS CABLES	TERMINAL TYPE											UT		UT		UT							
	TERMINAL SECTION		mm²									4		4		4							
	TERMINAL NUMBER																						
	CABLE SECTION		mm²																				

REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
1	24/05/2024	GRATTON	GIUSTI	GRATTON	MODIFIED AND REISSUED FOR APPROVAL
0	13/05/2024	BOGAR	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: AC UPS - TAG: UP-200F3

001 EJBC-5/C2401778/10.
ITEM 10
INTERNAL WIRING

CORTEM JOB: COV2401778
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27438
SHEET 2 NEXT 3
TOT. 4

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CAE EPLAN Electric P8

AUXILIARY
From Lighting & Small Power DB BOP DP-200N1
(Cubicle 03-Q41)
100-240V/N/PE~50/60Hz
back-up fuse gG10A 3G2.5mm2

LINE A
From LV Switchgear SG-200N1
(Cubicle A3/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

From LV Switchgear SG-200N1
(Cubicle A7/02)
Bypass mains 400V;3/PE~50Hz
gG63A 4G35mm2

LINE B
From LV Switchgear SG-200N1
(Cubicle A4/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

Not included in the AEG shipment

Code	Description
Q1	Rectifier input mains breaker
T40	Rectifier input isolation transformer
A1	Rectifier
A2	Inverter
T1	Inverter output isolation transformer
A3-A4	Static by-pass switch
A18	Display control module
A85	Heater
H1	Light

+MBC1
BY-200F3
Bypass transformer cabinet 40 kVA
1000007888.020
10009757

-Q10 L=80/65A I=0,8kA Icu=50kA
-T8 400V/400V 40kVA
-Q28.1 NC
-Q28.2 NC

+UPS1
BC-200F3A
Protect 8.33 40-400-210-400
1000007888.010
10009756

+UPS2
BC-200F3B
Protect 8.33 40-400-210-400
1000007888.010
10009756

-Q1 L=100/85A I=1,0kA Icu=50kA
-T40
-A1 REC
-A2 INV
-T1
-F1,-F2,-F3
-A3 SBS
-A4
-A18 Display
-A20 Parallel Adapter
INV CAN -X3 1-3 → 203 / 1.6
INV Sync -X5 1-4 → 205 / 1.6
-L11,-L12,-L13 Parallel preventive choke coil
-A24.1 BLÜ-PRO
-F91
-A12 ,-A13 Remote signaling

-Q71 NC
-Q72 NC
-Q29 1 INV operation 2 Manual bypass
-F25

DP-200F3
-QF31 B32A 300mA
-QF32 B32A ^^0mA
-QF33 B32A 300mA
-QF34 B16A 300mA
5pc
-QF38 B16A 300mA
-QF39 B10A 300mA
4pc
-QF42 B10A 300mA
-QF43 B10A
8pc
-QF50 B10A
-QF51 B6A
-QF52 B6A

Not included in the AEG shipment
Load 400/230V;3/N/PE~50Hz
max. gG16A
max. gG16A

2(1x70 mm2)

+BFB1
CB-200F3A
Battery fuse box 200 A
-Q2 L=200A
DC 24V max. 300W

+BFB2
CB-200F3B
Battery fuse box 200 A
-Q2 L=200A
DC 24V max. 300W

+BAT1
BA-200F3A
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

+BAT2
BA-200F3B
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors) attached.
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

*2 Connection cables are not included.

						Date	14.05.2024
01	500900000053	13.08.2024	Bedoschäfer	Editor	EDC		
02	500900007089	27.08.2024	Bedoschäfer	Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

System 40 kVA
Single-line diagram

1000007888_010 en

& FFA

A0 Sheet 1 Sheets 1

1000007888_010

S-701D Data Sheet for
AC Uninterruptible Power Systems (UPS) (IEC 62040-3)

JIP33 JOINT INDUSTRY PROGRAMME

Row							Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
5		**GENERAL**					
6	5.1.2	Vendor :	Input Data	AEG Power Solutions			
7	5.1.2	Order status :	for purchase	Noted			
8	5.1.2	Purchase order number, date :	1724000372 123A90A rev1 dated 22/4/2024	Noted			
9	5.1.2	Manufacturer :	Input Data	AEG Power Solutions			
10	5.1.2	Model number :	Input Data	2 x Protect 8.33 S10 40kVA			
11	5.1.2	Serial number :	Input Data	Released after production			
12	5.2.3	Application :	industrial	Noted			
13	5.3.3	Purchaser specified rated output power :	35	40kVA	kVA		
14	5.1.1	Quantity :	1	Confirmed. Redundant system			
15		Conformity assessment system (CAS) level :	D	Noted			
16		**CONFIGURATION**					
17	5.1.1, A.1, Figure A.2, Figure A.3A, Figure A.3B, Figure A.6	UPS configuration :	simplified parallel UPS with common bypass & common output-Figure A.3A	Confirmed			
18	5.1.1, B.1	UPS topology :	double conversion	Confirmed			
19	5.1.1	Static switch configuration :	in both inverter and bypass path	Confirmed			
20	5.4.2.3	Battery configuration :	2 x 50%	Confirmed. 15 min. autonomy each battery			
21	5.3.2, 5.3.4	Performance classification :	manufacturer to advise	-			
22	8.1.1.3	Bi-directional rectifier :	No	Not applicable			
23	8.4.2.11	Remote access required :	Yes (read only)	Confirmed. Modbus TCP			
24	8.4.2.11	Hardware (adapters, connectors, cables, etc.) required for remote access :	manufacturer to advise	Confirmed			
25	8.1.1.5, 8.1.1.6	On-line battery monitoring facility required :	string monitoring	Confirmed			
26	8.1.1.4	On-line battery testing feature required :	No	Noted			
27	8.1.1.4	Battery test load interface :	No	Noted			
28	5.4.2.3	DC earth leakage monitoring required :	No	Noted			
29	7.4.14	Single line diagram and status display :	on HMI	LCD display with synoptic			
30	8.1.2.11	Black start feature required :	Yes	Confirmed			
31	8.1.1.1	Earth screen required for isolation transformer :	manufacturer to advise	Confirmed on the by-pass isolation transformer			
32		**PHYSICAL ASPECTS**					
33	7.2.1	Mounting :	floor mounting	Confirmed			
34	7.2.1	Overall cabinet dimensions - length :	manufacturer to advise	900 + 600 + 900 mm	mm		
35	7.2.1	Overall cabinet dimensions - depth :	manufacturer to advise	860 mm	mm		
36	7.2.1	Overall cabinet dimensions - height :	manufacturer to advise	1915 mm	mm		
37	7.2.1	Reference outline drawing number :	Input Data	1724000372-EL-DA-00004			
38	7.2.1	Total UPS cabinet mass :	manufacturer to advise	2258 kg	kg		
39	7.2.1	Total UPS mass with batteries (if integrated) :	manufacturer to advise	Batteries not integrated	kg		
40	7.2.4, 7.2.5	Cable entry location :	top	Confirmed. Through by-pass cabinet by means of cable glands			
41	7.2.4, 7.2.5	Cable entry type :	removable - undrilled plate	Confirmed			
42	7.2.4, 7.2.5	Gland plate material :	manufacturer standard	Steel			
43	7.2.1	Paint colour :	supplier standard	RAL7035			
44	7.2.1	Canopy for cabinet required :	No	Noted			
45	7.3.9	Document holder :	Yes	Confirmed			
46		**INSTALLATION**					
47	4,1	Site :	offshore - fixed	Noted. Painting class C3-H			
48	4,1	Location of UPS cabinet installation :	indoor	Noted			
49	7.3.1, 7.3.2	Front access clearance dimensions for operation and maintenance :	800	Noted	mm		
50	7.3.2	Side clearance for ventilation (if required) :	manufacturer to advise	0	mm		
51	7.3.2	Rear clearance for ventilation (if required) :	manufacturer to advise	100 mm	mm		
52	7.2.3, 7.9.3	Installed location of battery :	inside UPS room	Battery housed on rack			
53	7.2.3	Maximum battery assembly dimensions (L x D x H):	manufacturer to advise	Battery rack 1050 x 725 x 1032	mm		
54		**SAFETY**					
55	5.1.1	Accessibility :	operator access area	Front access			
56	5.1.1	Key required for cabinet :	Yes	Confirmed			
57	7.2.2	Degree of protection (with closed doors) :	IP31	IP43			
58	7.2.2	Degree of protection (with open doors) :	IP2X	Confirmed			
59	7.7.5	Cooling fan replacement while UPS in service :	No	Noted			
60	5.1.2	Local language for caution/danger/warning labels :	English	Confirmed			
61		**ELECTROMAGNETIC COMPATIBLITY**					
62	5.1.4	Emission :	UPS Cat C3	Confirmed			
63	5.1.4	Immunity :	UPS Cat C3	Confirmed			
64		**ENVIRONMENTAL CONDITIONS**					
65	4.2.1.1	Minimum ambient temperature (operation) :	-8,4	Confirmed with heater option included	°C		
66	4.2.1.1	Maximum ambient temperature (operation) :	40	Confirmed	°C		
67	4.2.1.1	Maximum relative humidity (operation) :	95	Confirmed. Not condensing	%		
68	4.2.1.1	Temperature at which relative humidity is specified (operation) :	Input Data	-	°C		
69	4.2.1.2	Maximum altitude (operation) :	Sea level	Noted	m		
70	4.2.2.1	Minimum ambient temperature (storage and transportation) :	-5	Noted	°C		
71	4.2.2.1	Maximum ambient temperature (storage and transportation) :	40	Noted	°C		
72	4.2.2.1	Maximum relative humidity (storage and transportation) :	95	Noted	%		
73	4.2.2.1	Temperature at which relative humidity is specified (storage and transportation) :	Input Data	-	°C		
74	4.3.2	Seismic requirement data :	Zone 2	Noted			
75	4.2.2.1	Storage site of UPS :	indoor – natural ventilation	Noted			
76	4.3.2	Additional or unusual conditions (operation) :	Input Data	Not applicable			
77	4.3.3	Additional or unusual conditions (storage and transportation) :	Input Data	Not applicable			
78	5.1.5	Acoustic noise at 1 m - normal mode :	70	< 65 dB(A)	dBA		
79	5.1.5	Acoustic noise at 1 m - stored energy mode :	70	< 65 dB(A)	dBA		
80		**COMMUNICATION INTERFACE(S)**					
81	5,6	(1) Interface media for SCADA (ICSS / DCS) :	serial	Modbus TCP + relays			
82	5,6	(1) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
83	5,6	(1) Interface protocol for SCADA (ICSS / DCS) :	Modbus	Modbus TCP + relays			
84	5,6	(2) Interface media for electrical management / control system :	serial	Modbus TCP + relays			
85	5,6	(2) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
86	5,6	(2) Interface protocol for electrical management / control system :	Modbus	Modbus TCP + relays			
87	5,6	(3) Remote access / monitoring software required:	Yes	Noted			
88	5,6	(3) Interface media for remote access / monitoring:	ethernet (fiber)	Noted			
89	5,6	(3) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
90	5,6	(3) Interface protocol for remote access / monitoring :	Modbus	Modbus TCP + relays			
91		**AC INPUT SPECIFICATIONS**					
92	5.2.1	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
93	5.2.1	Voltage (steady state, R.M.S) - tolerance :	+/- 10	Confirmed	%		
94	5.2.1	Frequency - rated :	50 Hz	Confirmed			
95	5.2.1	Frequency - tolerance :	+/- 2	Confirmed	%		
96	5.2.2	Phases required :	3	3			
97	5.2.2	Neutral required :	Yes	Confirmed. Neutral not required for the rectifier supply			
98	5.2.2	Current (R.M.S) - rated (with the energy storage device charged) :	manufacturer to advise	71,2A	A		
99	5.2.2	Power factor :	manufacturer to advise	Data not characterized by the factory. Measurable on request			
100	5.2.2	In-rush (% of rated current) :	manufacturer to advise	Typically 10 x In	%		
101	5.2.2	In-rush (time) :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
102	5.2.2	Maximum current (with low input volt and energy storage device charging) :	manufacturer to advise	92A at 400Vac	A		
103	5.2.2	Time for overload (125 % of rated current) :	10	Confirmed	min		
104	5.2.2	Time for overload (150 % of rated current) :	1	Confirmed	min		
105	5.2.2	Total harmonic distortion - current (THD p.u.) :	8	Confirmed. The AC UPS works with an input voltage harmonic distortion ≤ 8%	%		
106	5.2.3	Short circuit current of the input supply (Minimum and Maximum) :	50	Confirmed. The charger is equipped with an input MCCB (Q1) with Isc = 50kA	kA		
107	5.2.2	Minimum short circuit current :	Input Data	Data not characterized by the factory. Measurable on request	kA		
108	5.2.2	Earth leakage current :	Input Data	Data not characterized by the factory. Measurable on request	mA		
109	5.2.2	AC power distribution system - compatibility :	TN-S	Confirmed			
110	5.2.3	Additional or unusual conditions :	Input Data	Not applicable			
111	5.2.3, 7.5.4	Cable size (cross-section area) - input mains :	Input Data	min 50 sqmm - max 2x95 sqmm	sq.mm.		
112	5.2.3, 7.5.4	Cable size (cross-section area) - input bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
113	5.2.3, 7.5.4	Cable size (cross-section area) - input maintenance bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
114	7.4.8, 8.1.1.1	Input isolation transformer required :	Yes	Confirmed			
115	7.4.10	Input isolation transformer winding :	supplier standard	Aluminium			
116		**DC AND BATTERY SPECIFICATIONS**					
117	5.4.2.2	DC voltage level :	220	Confirmed	V d.c.		
118	5.4.2.2	Design life :	5	> 12 years	years		
119	5.4.2.2	Float service life :	manufacturer to advise	Dependent from temperature	years		
120	5.4.2.2	Shelf life of battery :	manufacturer to advise	3 months	months		
121	5.4.2.2	Quantity of cells and strings :	manufacturer to advise	18 blocks - 1 string	nos.		
122	5.4.2.2	Nominal voltage (total) :	manufacturer to advise	216V	V d.c.		
123	5.4.2.2	Battery technology :	sealed nickel cadmium	Lead-Acid VRLA GEL			
124	5.4.2.2	Nominal AH capacity :	manufacturer to advise	150Ah	AH		
125	5.4.2.2	Discharge rate (C-rate) :	Select	C20			
126	5.4.2.2	Electrolyte fill status :	manufacturer standard	Not applicable			
127	8.1.2.3	Purchaser's requirement (% of battery recharge level - 1) :	80	Confirmed with charging current limited to 0,1C	%		
128	8.1.2.3	Purchaser's requirement (time for battery recharge level - 1) :	10	Confirmed	Hours		
129	8.1.2.3	Purchaser's requirement (% of battery recharge level - 2) :	100	Data not characterized by the factory. Measurable on request	%		
130	8.1.2.3	Purchaser's requirement (time for battery recharge level - 2) :	24	Data not characterized by the factory. Measurable on request	Hours		
131	5.4.2.2	Stored energy time (Autonomy time at 100% rated load) :	30	Confirmed with both batteries	min		
132	5.4.2.2	Restored energy time (recharge time to 80% capacity):	manufacturer to advise	10h	hours		
133	5.4.2.2	Ambient reference temperature :	40	Confirmed	°C		
134	5.4.2.2	Earth condition/isolation :	manufacturer to advise	floating			
135	5.4.2.2	Ripple current (R.M.S) :	manufacturer to advise	< 2% RMS	%		
136	5.4.2.2	Nominal discharge current (stored energy mode):	manufacturer to advise	-	A		
137	5.4.2.2	DC Fault current rating :	manufacturer to advise	Data not characterized by the factory. Measurable on request	A d.c.		
138	5.4.2.2	Cable volt drop recommendation (≤ % at nominal discharge current) :	manufacturer to advise	2%	%		
139	5.4.2.2	Charging regime :	manufacturer to advise	Constant voltage, current limited			
140	5.4.2.2	Charge voltage (float) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
141	5.4.2.2	Charge voltage (boost) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
142	5.4.2.2	Charge voltage (equalising) and tolerance band :	manufacturer to advise	Not applicable to VRLA batteries	V d.c.		
143	5.4.2.2	Minimum end of discharge voltage :	manufacturer to advise	178,2V	V d.c.		
144	5.4.2.2	Charge current limit (or range) :	limitation of batteries charging to 30% of the UPS sizing	15A (0,1C)	A d.c.		
145	5.4.2.2	Temperature compensated charging required:	Yes	Confirmed			
146	5.4.2.3	Battery isolation box required :	Yes	Confirmed			
147	5.4.2.3	Additional or unusual conditions :	Input Data	Not applicable			
148	5.4.2.3	Load profile for battery design, attached :	No	Noted			
150		**BATTERY ROOM**					
151	4.2.1.1	Minimum ambient reference temperature :	-8,4	-8,4°C (used for battery sizing)	°C		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
152	4.2.1.1	Maximum ambient reference temperature :	40	+40°C (used for battery sizing)	°C		
153	5.4.2.1	Area classification :	safe	Noted			
154	5.4.2.1	Hazardous area classification :	Zone 2	Noted			
155	5.4.2.1	Minimum gas subdivision and temperature class (for equipment in battery room) :	Select	-			
156	8.1.2.10	Temperature sensor (for VRLA / partial gas recombination batteries) :	Yes	Confirmed. Standard sensor			
157		**BATTERY ISOLATOR BOX SPECIFICATIONS**					
158	7.9.1	Enclosure material :	manufacturer standard	Aluminium alloy			
159	7.9.1	Mounting :	Select	Wall mounting			
160	7.9.1	Breathing valve required :	manufacturer to advise	No			
161	7.9.1	Internal earth bar :	tinned copper	-			
162	7.9.3	Minimum design temperature :	-8,4	Noted	°C		
163	7.9.3	Maximum design temperature :	40	Noted	°C		
164	7.9.3	Maximum relative humidity :	95	Noted	%		
165	7.9.3	Temperature at which relative humidity is specified:	Input Data	-	°C		
166	7.9.4	Degree of protection :	IP 31	IP65			
167	7.9.5	Area classification :	safe	Noted			
168	7.9.5	Hazardous area certification required :	none	-			
169	7.9.5	Hazardous area classification :	N/A	Not applicable			
170	7.9.5	Hazardous area level of protection :	N/A	Not applicable			
171	7.9.6	Cable entry :	top	Bottom with cable glands			
172	7.9.6	Cable indirect entry via 'ex e' enclosure :	No	Not applicable			
173	7.9.6	Battery cable size (cross-section area) :	Input Data	70 sqmm armored cable class-2	sq.mm.		
174	7.9.6	Cable entry diameter in battery box (ISO metric) :	Input Data	22,6 mm			
175	7.9.7	Battery isolator type :	MCCB	Confirmed			
176	7.9.8	Rated current of breaker / switch fuse unit :	manufacturer to advise	200A	A		
177	7.9.8	Rated breaking current (Icu) - (if breaker used) :	manufacturer to advise	36kA	kA		
178	7.9.10	Breaker status potential free contact (NO) :	two	Confirmed			
179	7.9.9	Under voltage trip feature required :	Yes	Confirmed			
180	7.9.9	Under voltage trip coil for :	black start reserve	Confirmed			
181	8.1.2.12	ESD trip required :	Yes - via shunt trip	Yes - through SIL relay			
182	8.1.2.12	ESD override key switch :	key captive in overridden position and with status contact	Confirmed			
183	7.9.9	Over voltage trip required :	Yes	Not applicable			
184		**AC OUTPUT SPECIFICATIONS**					
185	5.3.2	Rated output power (apparent) :	35	40kVA	kVA		
186	5.3.2	Rated output power (active) :	28	32kW	kW		
187	5.3.2	AC power distribution system - compatibility :	TN-S	Noted			
188	5.3.2	Phases available :	3	Confirmed			
189	5.3.2	Neutral available :	Yes	Confirmed			
190	5.3.2	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
191	5.3.2	Voltage - normal mode variation :	manufacturer to advise	+/- 1%	%		
192	5.3.2	Voltage - storage energy mode variation :	manufacturer to advise	+/- 1%	%		
193	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - linear :	5	< 3%	%		
194	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - non linear :	5	Confirmed	%		
195	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - linear :	5	< 3%	%		
196	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - non linear :	5	Confirmed	%		
197	5.3.2	% Voltage unbalance, 100% load unbalance :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
198	5.3.2	Phase angle displacement, 100% load unbalance:	manufacturer to advise	Data not characterized by the factory. Measurable on request	°		
199	5.3.2	% Voltage transient, 100% step load - linear :	manufacturer to advise	+/- 2%	%		
200	5.3.2	Voltage transient recovery time, 100% step load - linear :	manufacturer to advise	2 ms	s		
201	5.3.2	% Voltage transient, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
202	5.3.2	Voltage transient recovery time, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
203	5.3.2	% Voltage transient, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
204	5.3.2	Voltage transient recovery time, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
205	5.3.2	% Voltage transient, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
206	5.3.2	Voltage transient recovery time, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
207	5.3.2	Frequency (steady state) - rated :	50	Confirmed	Hz		
208	5.3.2	Frequency (steady state) - normal mode variation:	2	+/- 0,1%	%		
209	5.3.2	Frequency (steady state) - storage energy mode variation :	2	+/- 0,1%	%		
210	5.3.2	Frequency (steady state) - free running variation:	2	+/- 0,1%	%		
211	5.3.2	Synchronization (maximum ± % range of rated frequency) :	manufacturer to advise	-	%		
212	5.3.2	Maximum synchronism phase error (referred to 360° cycle) :	manufacturer to advise	-	%		
213	5.3.2	Maximum slew rate :	manufacturer to advise	-	Hz/s		
214	5.3.2	Current (R.M.S) - rated :	manufacturer to advise	58A	A		
215	5.1.8.1, 5.3.2	Current (R.M.S) - overload capability (% of rated current for ten minutes) :	manufacturer to advise	125%	%		
216	5.1.8.2, 5.3.2	Current (R.M.S) - overload capability (% of rated current for one minute) :	manufacturer to advise	150%	%		
217	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (% of rated current) :	manufacturer to advise	3,68 x In (1ph) - 2,02 x In (3ph)	%		
218	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (time duration) :	manufacturer to advise	500 ms	s		
219	5.3.2	Current (R.M.S) - limitation (% of rated current) :	manufacturer to advise	-	%		
220	5.3.2	Current (R.M.S) - limitation (time duration) :	manufacturer to advise	-	s		

Row	S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)						Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
221	5.3.2	Current (R.M.S) - fault clearing capability (normal mode) :	manufacturer to advise	-	A		
222	5.3.2	Current (R.M.S) - fault clearing capability (stored energy mode) :	manufacturer to advise	-	A		
223	5.3.2	Load power factor - rated :	manufacturer to advise	0,8			
224	5.3.2	Load power factor - displacement (permissible limit lead) :	manufacturer to advise	Cap - 1 - Ind			
225	5.3.2	Load power factor - displacement (permissible limit lag) :	manufacturer to advise	Cap - 1 - Ind			
226	5.3.2	Efficiency in normal mode - 100% load :	manufacturer to advise	86,4%	%		
227	5.3.2	Efficiency in normal mode - 75% load :	manufacturer to advise	87,3%	%		
228	5.3.2	Efficiency in normal mode - 50% load :	manufacturer to advise	87,2%	%		
229	5.3.2	Efficiency in normal mode - 25% load :	manufacturer to advise	83,8%	%		
230	7.4.8	Output isolation transformer required :	No	Yes. Output transformer is included in AEG standard design			
231	7.4.10	Output isolation transformer winding :	Select	Aluminium			
232	7.6.5	AC output neutral earth link :	earthed	Noted. Externally			
233	7.1.6	Reference document to AC output distribution board :	To see Electrical Load List	Noted			
234	5.3.3	Integrated AC output distribution board with MCBs:	Yes	Confirmed			
235	5.3.3	Cable size (cross-section area) - output:	manufacturer to advise	min 16 sqmm - max 2x95 sqmm	sq.mm.		
236		**BYPASS SPECIFICATIONS**					
237	C.3	Bypass transfer time :	manufacturer to advise	0	msec		
238	C.3	Bypass static switch rated current :	manufacturer to advise	40kVA - 58A	A		
239	C.3	Bypass protection fuse or circuit breaker rating :	manufacturer to advise	MCCB 65A	A		
240	7.4.8	Bypass transformer required :	Yes	Confirmed			
241	7.4.10	Bypass transformer winding :	copper or aluminum	Aluminium			
242	7.3.5	Maintenance bypass and bypass transformer location:	integrated	Manual by-pass integrated			
243	8.3.6, C.5	Overall maintenance bypass :	internal	Q29 manual by-pass integrated			

ITEM	Tag	UP-200F3	: AC UPS 35 kVA Redundant System with By-Pass	Dwg	123A90-DDL-EL-DS-20032		
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)	Module	LD_B-300		
TASK	code	C10000871	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form CPX16	Charger/Inverter

1	Check equipment is de-energized and safe.	OK
2	Check equipment is undammaged, correctly mounted, tagged and installed in accordance with layout drawings.	OK
3	Check conformity against data sheet and project specification	OK
4	Check manufacturer's nameplate data.	OK
5	Check all panel-front components, indicators, lamps, meters are securely mounted and undamaged.	OK
6	Check equipment cleanliness.	PL
7	Check all earthing and bonding against drawings.	OK
8	Check battery cable termination against drawings.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

NAMEPLATE DATA

Manufacturer :	AEG Power Solution		Serial N° :	BC-200F3A: 1010863/001 BC-200F3B: 1010863/002		Type	Protect 8.33 / 40kVA	
Input	400	V	Output	400	V	Rating	10	kVA
Input	68	A	Output	58	A	Specification	1724000372-EL-DA-00004	
SUPPLY SWBD & CUB ref:	1724000372-EL-DG-00007					Data Sheet:	1724000372-EL-DS-00005	

TESTING AND MEASUREMENT INSTRUMENT USED

Type	Serial n°	Calibration certificate	Validity
NA	NA	NA	NA

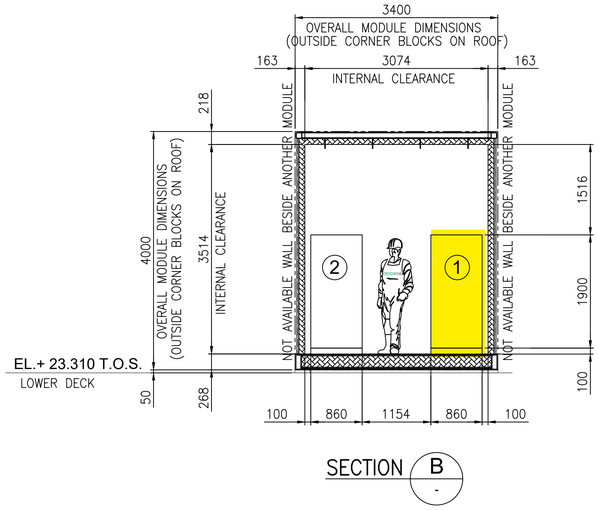
TEST RESULTS

TEST VOLTAGE	Note
INSULATION RESISTANCE	Note

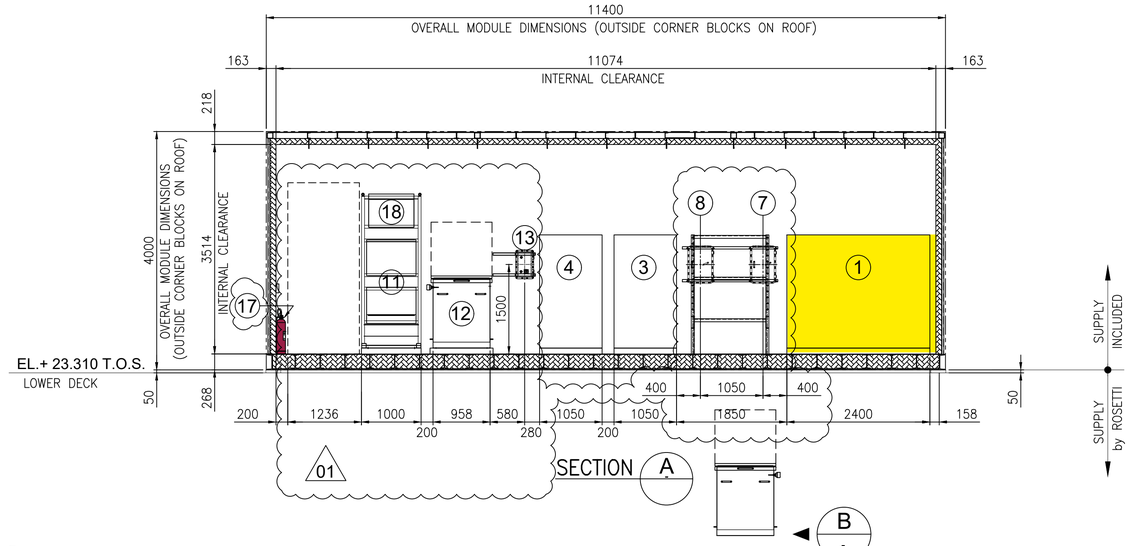
Comments: Note: check on connection is done during cable ispection. Please refer to the relevant ITR.

Note: TEST done during FAT.

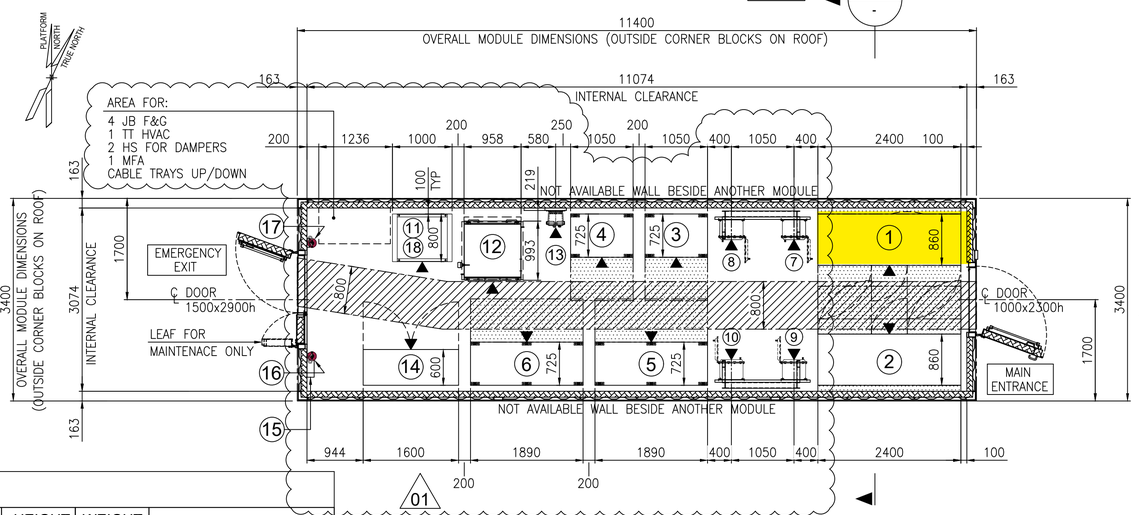
Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-29	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-29T16:04:38.775Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:19:33.670Z	



SECTION B



SECTION A

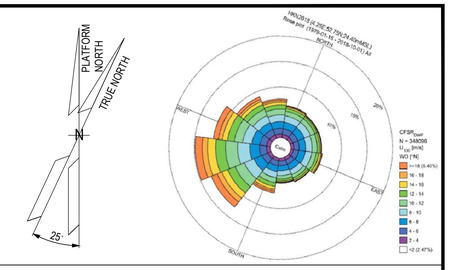


A

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

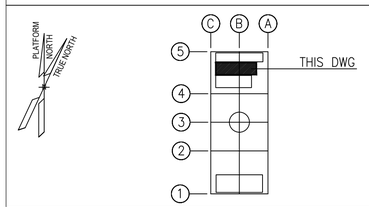
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20106**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DL-20106	001	01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

PLATFORM NORTH
TRUE NORTH

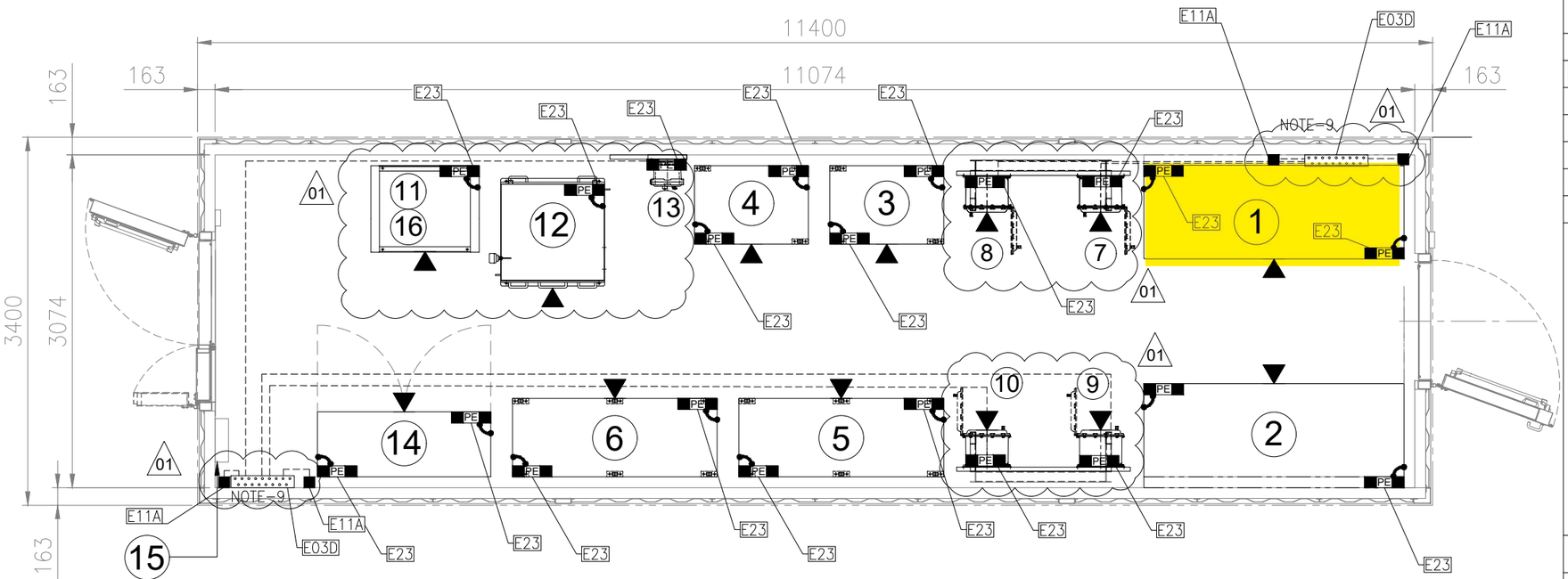
EQUIPMENT LIST		
REF.	TAG No.	DESCRIPTION
1	UP-200F3	AC UPS 35kVA
2	UP-200F4	AC UPS 15kVA
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA
11	NC-200F2_BC-200F2A/B	NAVAID PANEL
12	BA-200F2	BATTERY BOX NAVAID
13	CB-200F2	ISOLATOR BOX NAVAID
14	B300-HSB-001	DISTRIBUTION & HVAC PANEL – AC/UPS ROOM
15	–	EYE WASH STATION
16	BC-200F2	BATTERY CHARGER NAVAID

01

01

NOTES

1. THIS DOUCMENT IS VALID ONLY FOR EARTHING LAYOUT.
2. THE CABLE SIZE SHALL BE CONFIRMED.
3. THE EXACT POSITION OF EARTHING/MARSHALLING BUS BAR SHALL BE DEFINED BY VENDOR.
4. THE EARTHING BUS BAR INSTALLATION SHALL BE PREFERABLY IN VERTICAL MODE.
5. FOR TYPICAL DETAILS PLEASE REFER DOCUMENT "123A90-DDL-EL-DD-20090-ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM".
6. DUE TO THE TOP CABLE ENTRIES THE EARTHING BUS BAR INSIDE THE CABINETS SHALL BE INSTALLED AT THE TOP OF THE CABINETS THEMSELVES.
7. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER DOCUMENT 123A90-DDL-EL-RE-20154.
8. ALL THE NON WELDED OBJECTS SHALL BE EARTHED.
9. CONTAINER WILL HAVE A BTH (EARTHING BAR TINNED COPPER) WITH 2 EARTHING BOSS, INSTALLED IN THE SOUTH-WEST CORNER AT AN ELEVATION OF 2.5M FROM THE CONTAINER FLOOR. EARTHING BOSS SHALL BE INSTALLED AT SAME ELEVATION 2.5M.



EARTHING LAYOUT

"B-300" UPSs & BATTERIES SWITCHROOM

PLAN

EL.+ 23.310 T.O.S.

SYMBOL	DESCRIPTION
PE	EARTHING BUS
	EARTHING BAR TINNED COPPER WITH no.18 HOLES
	35sq.mm Y/G INSULATED COPPER CONDUCTOR FOR PE
PE	PROTECTIVE EARTH
	EARTHING BOSS AISI316L
	JUMPER CONNECTION
01	FRONT OF EQUIPMENT

REFERENCE	
DOCUMENT NUMBER	DOCUMENT TITLE
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS -EARTHING SYSTEM
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT-UPSs & BATTERIES SWITCHROOM
1724000049-AR-DD-00020	B-300 DETAILED DRAWINGS – E&I SHELTERS

01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20138**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/05/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT – UPSs & BATTERIES SWITCHROOM
"B-300" UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:50

A3 | DRAWING NO. 123A90-DDL-EL-DL-20138 | SHEET 003 | REV. 01

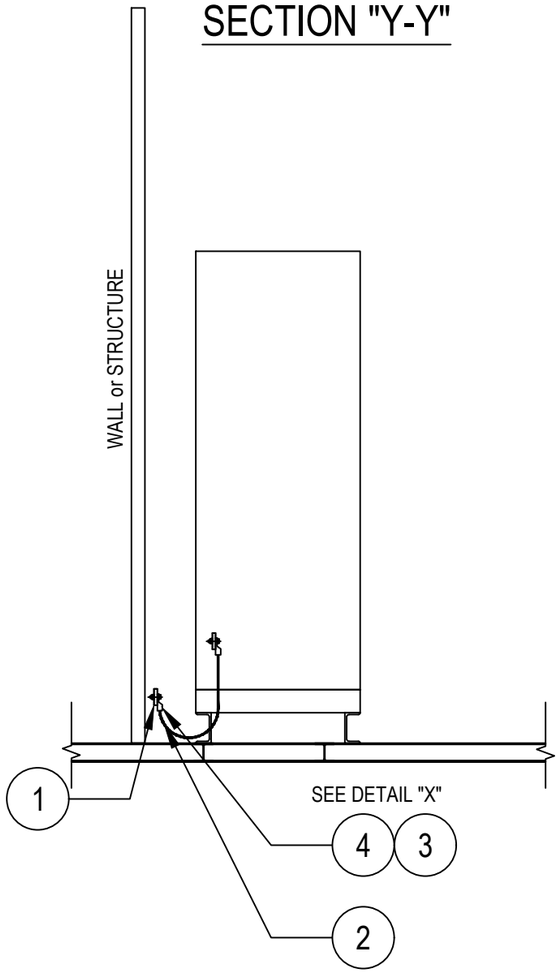
F.to UNI A3: 420mmx297mm

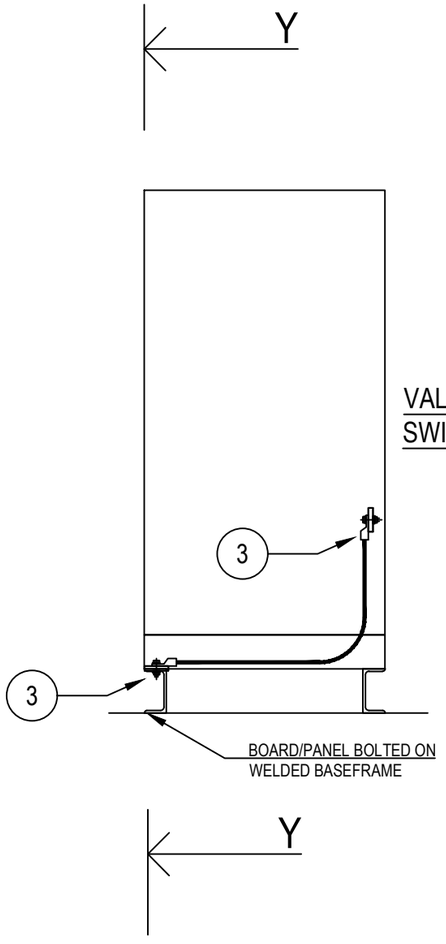
File Name : 123A90-DDL-EL-DL-20138 Rev. 01

E23

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	MARSHALLING EARTHING BAR	TINNED COPPER	50X5		NOTE 1
2	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm² SEE NOTE 1		NOTE 1
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm² SEE NOTE 1	4	NOTE 1
4	BOLT, PLANE WASHER, GROWER SPRING WASHER AND NUT	AISI 316L	M10X30	4	

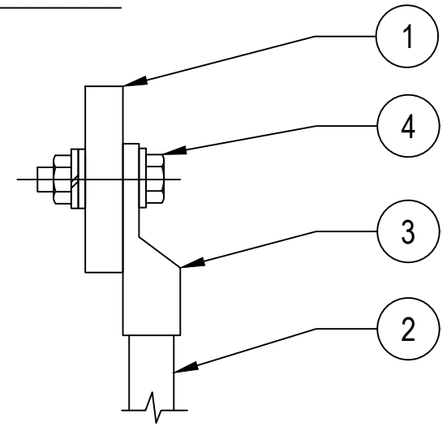
SECTION "Y-Y"





VALID FOR HV/LV SWITCHGEAR

DETAIL "X"



NOTES:

1) FOR SIZE OF THE EARTHING CABLE SEE ALSO EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_G	25/10/24	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 PANELS/BOARDS IN TECHNICAL ROOM

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	011	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

Base Load Power Hub (BLPH)

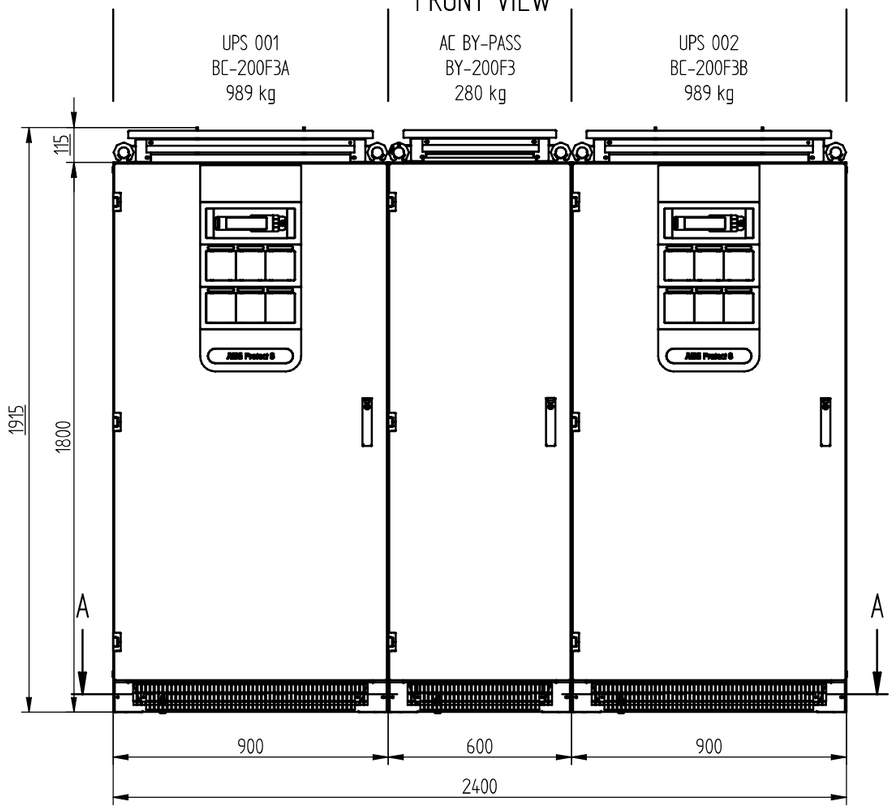
AC UPS PAS - TAG: UP-200F3

GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS

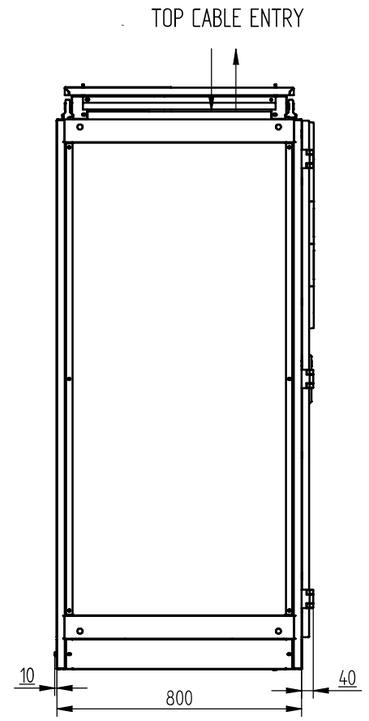
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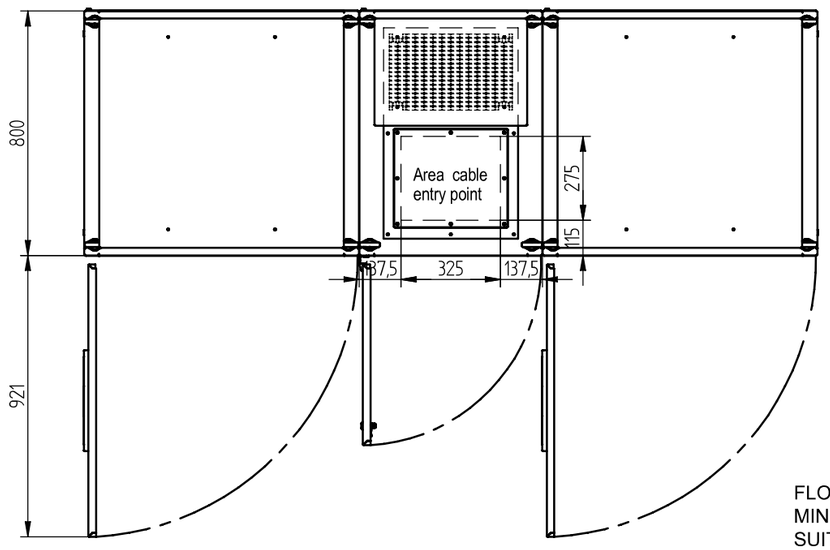
FRONT VIEW



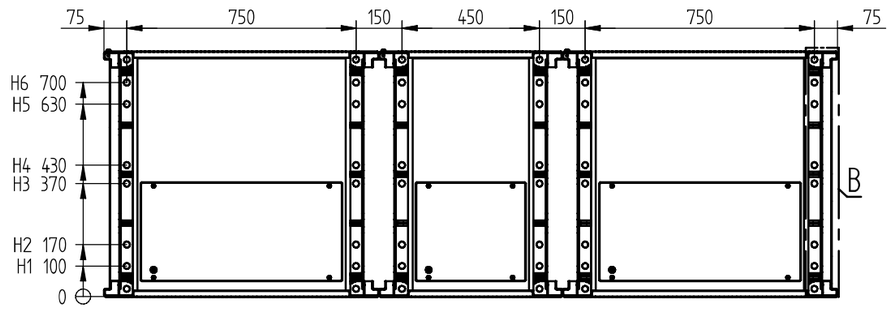
SIDE VIEW



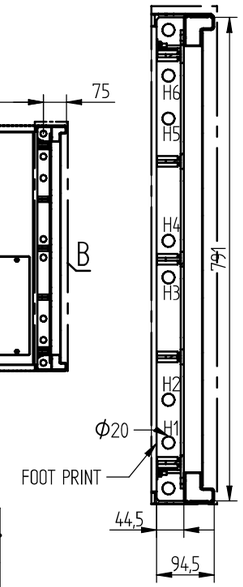
TOP VIEW



SECTION A-A - FOOT PRINT VIEW



DETAIL B
FOOT PRINT



Befestigungspunkte / attachment points		
Zugänglichkeit / accessibility	Vorzug / preference	Optional
nur von vorn / only from the front	H1, H5	H2-H4
von vorn u. hinten / from front a. rear	H1, H6	H2-H5

FLOOR FIXING RECOMMENDED
MINI 150daN AT TEARING.
SUITABLE FROM M8 TO M18 BOLT RANGE.
SUGGESTED M16 BOLT WITH LARGE WASHER

Scale 1:20 Mass:-

				Date	16.04.2024			
02	Top Entry	14.06.2024	Ste	Editor	A.Stemmer			
01	First Issue	16.04.2024	Ste	Date	16.04.2024			
Stat.	Alteration	Date	Name	Check	J.S.	Origin:	repl.for:	repl.by:

AEG POWER SOLUTIONS

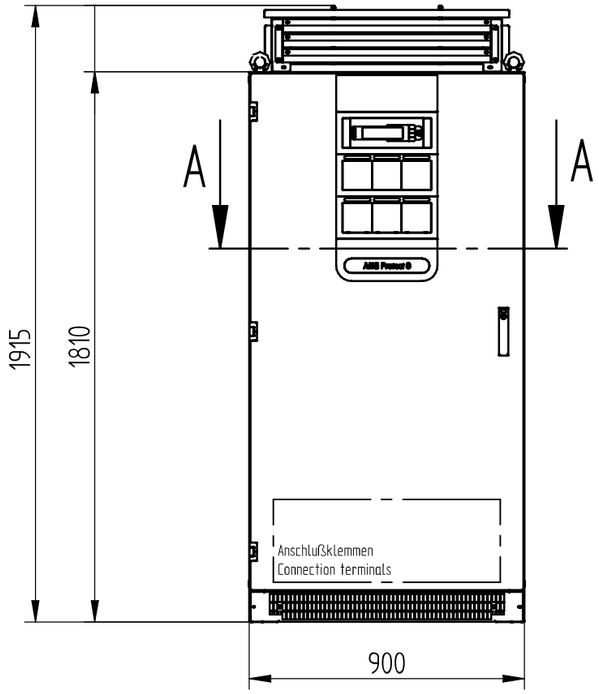
UPS SYSTEM 35 kVA
AC UPS PAS - TAG: UP-200F3
Outline drawing

1724000372-EL-DA-00004

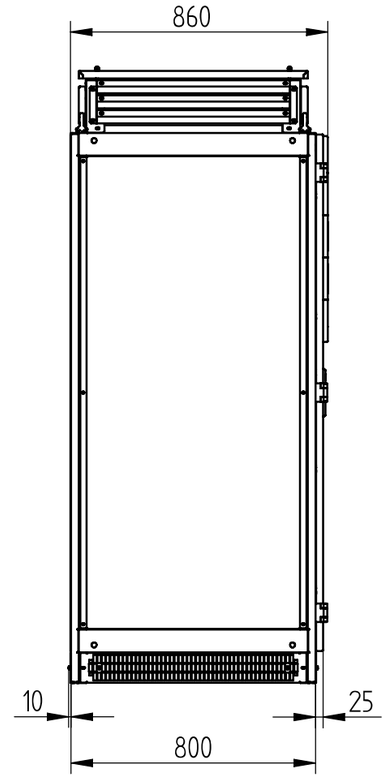
10009757_MTD_EN-02 CAD A3 en

Page 1
1 Pa.

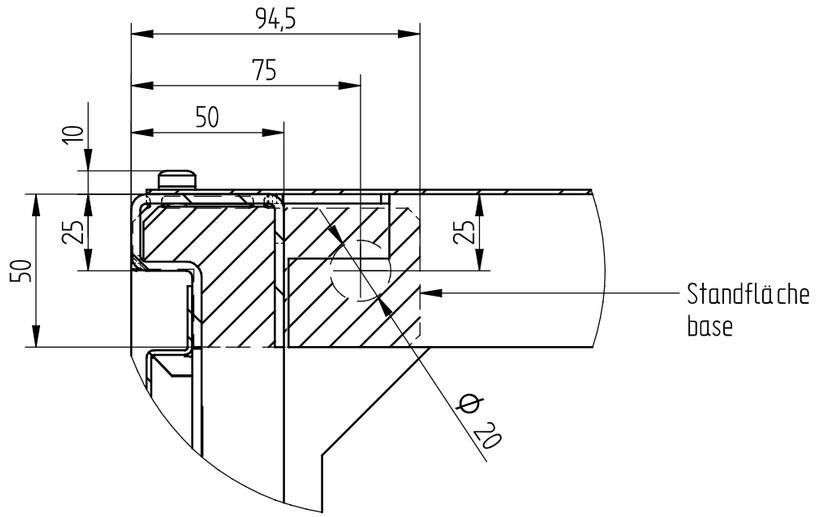
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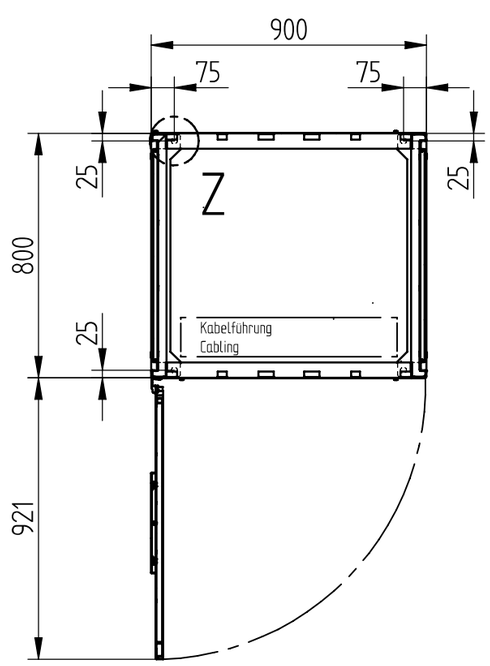
SECTION A-A



DETAIL Z



1:2



FOOT PRINT
VIEW

Supplementary data:
Technical data sheet

Ergänzende Angaben:
Technisches Datenblatt

Scale 1:20

				Date	25.11.2013				
				Editor	A.Gabel				
01	Logo/IP height update	23.01.2019	Sik	Date	23.01.2019				
Stat.	Alteration	Date	Name	Check	M.Wäsche	Origin:	repl.for:	repl.by:	

AEG POWER SOLUTIONS

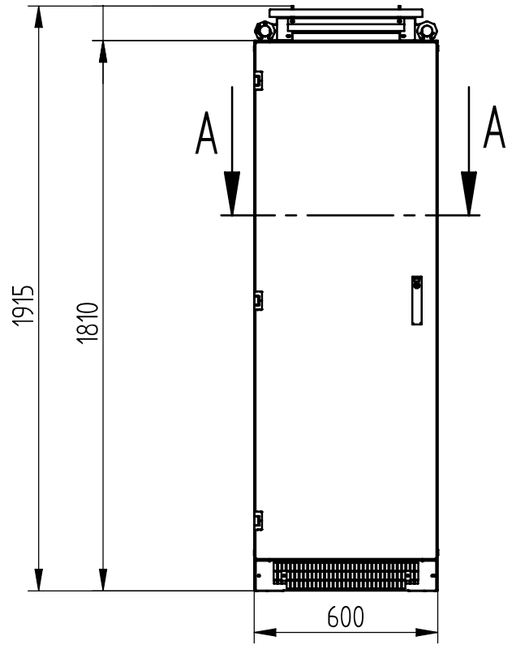
Cabinet 900 mm width
Mechanical details

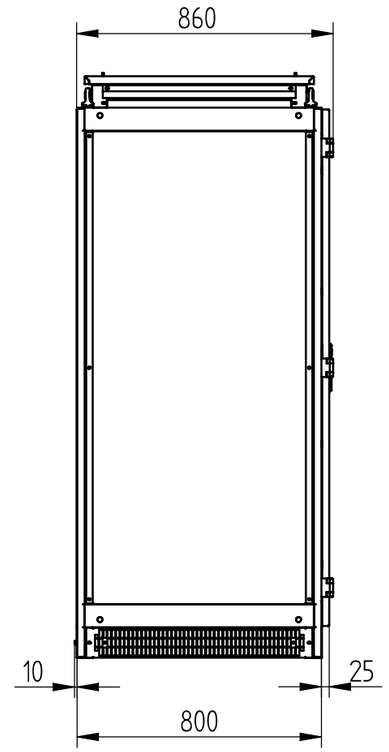
9100002469_mb-01

CAD A3 en

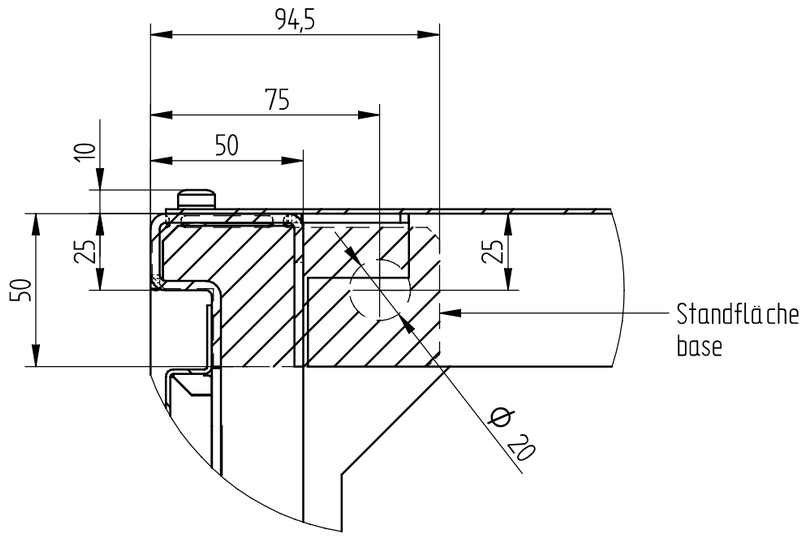
Page Pa.

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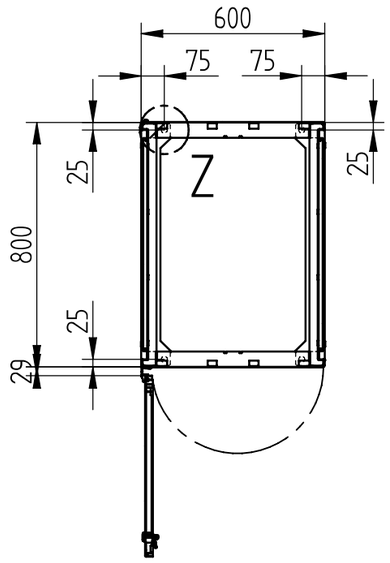


DETAIL Z



1:2

SECTION A-A

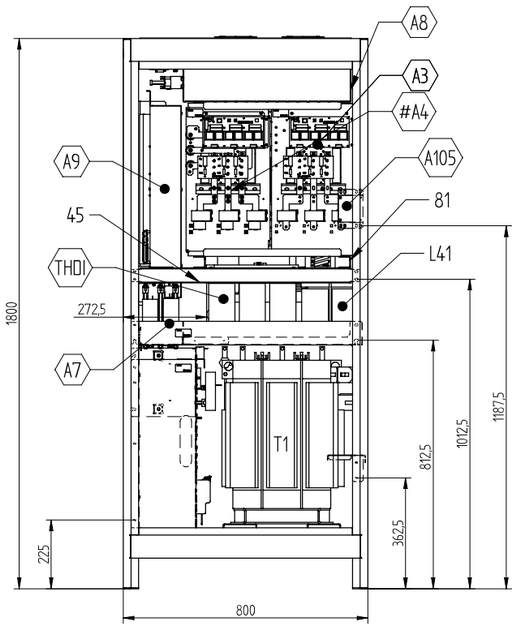


FOOT PRINT
VIEW

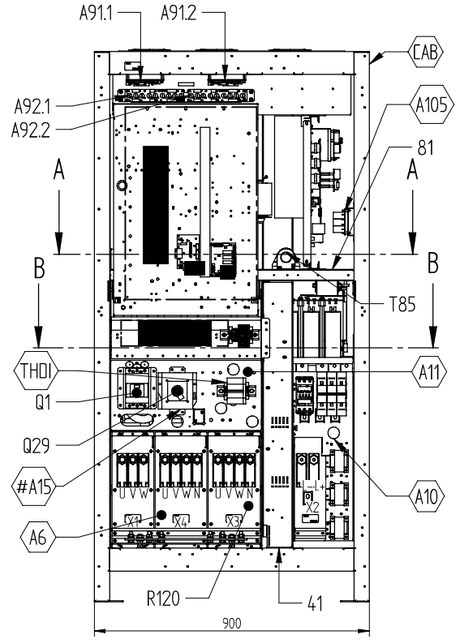
Scale 1:20

				Date	25.01.2019		AEG POWER SOLUTIONS	Cabinet 600 mm width Mechanical details	
				Editor	S.Sikora				9100003148_mb-00
				Date	25.01.2019				CAD A3 en
Stat.	Alteration	Date	Name	Check	M.Wäsche	Origin:	repl.for:	repl.by:	Page Pa.

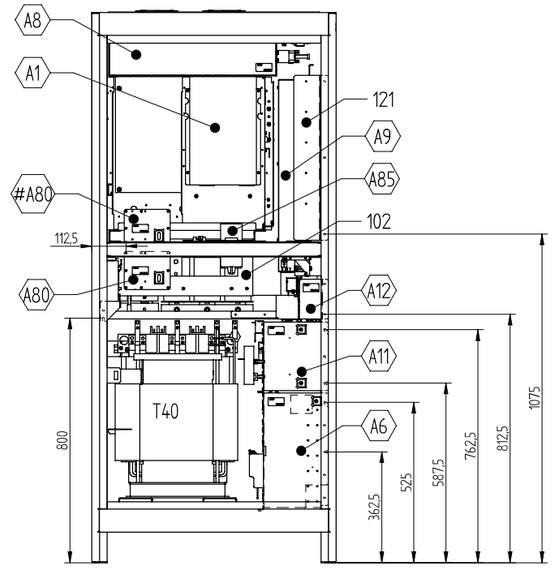
INTERNAL SIDE VIEW



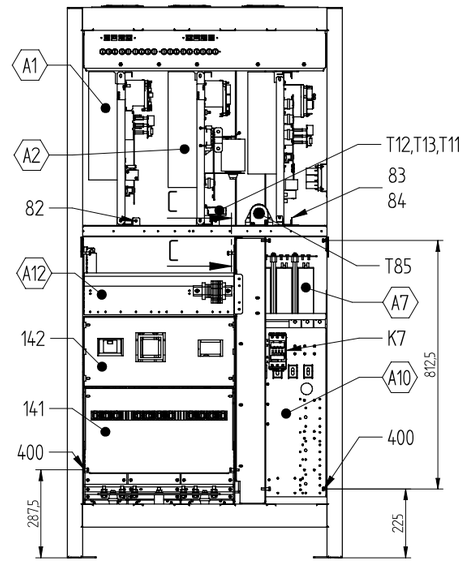
INTERNAL FRONT VIEW



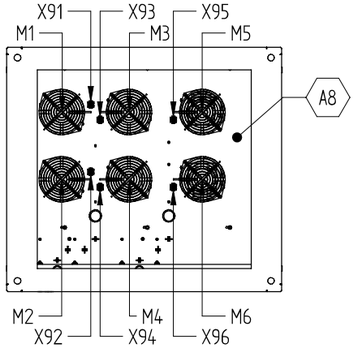
INTERNAL SIDE VIEW



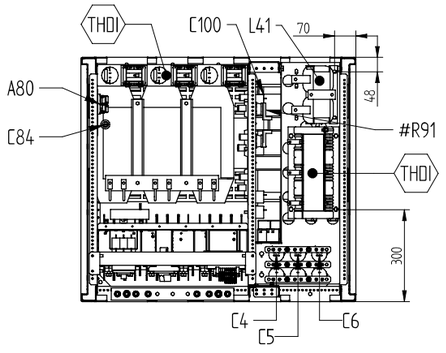
INTERNAL FRONT VIEW WITHOUT CONTROL

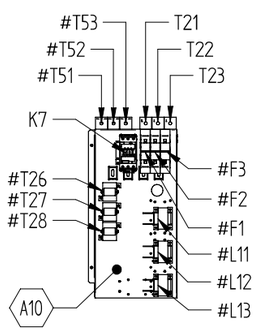


TOP VIEW

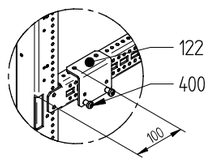


SECTION A-A



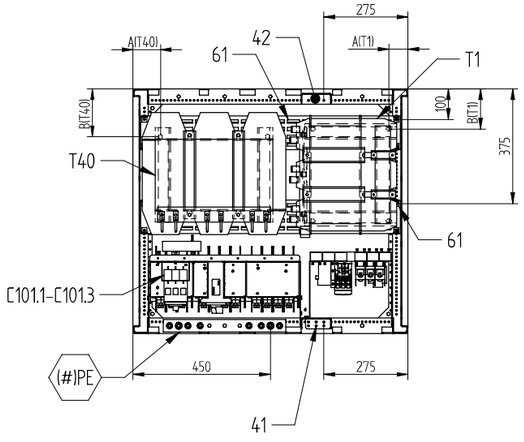


DETAIL Z

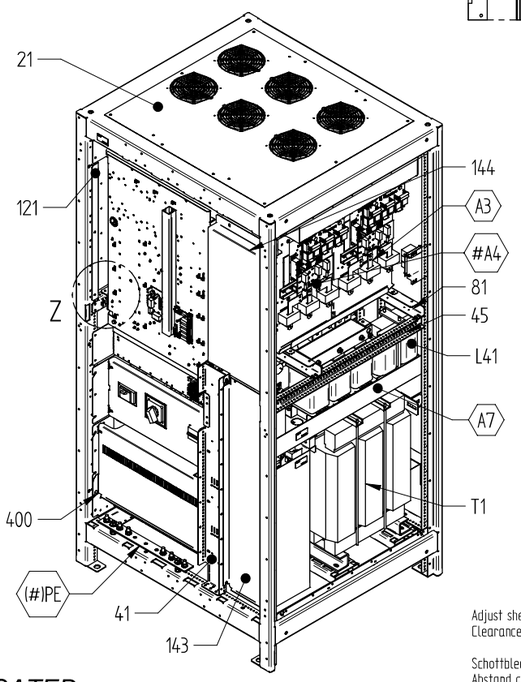


1:5

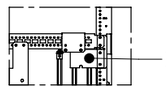
SECTION B-B



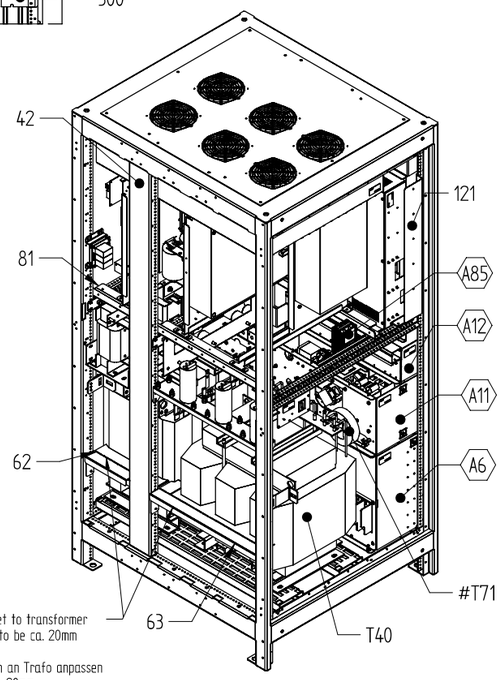
ISO VIEW



SECTION C-C



ISO VIEW



Adjust sheet to transformer
Clearance to be ca. 20mm

Schottblech an Trafo anpassen
Abstand ca. 20mm

Einbauorte T1 & T40 Assemblypositions T1 & T40			
Sachnummer Partnumber	Zulieferer Supplier	A	B
T1 - 40000243	Trasfo Project	62	131.5
T1 - 40000243	Intermagnetics	65	131.5
T1 - 40000243	IMEL	79.5	131.5
T1 - 40011987	Elettromil	62	131.5
T40 - 40012282	Trasfo Project	112	130.5
T40 - 40012282	Intermagnetics	112.5	131.5
T40 - 40012282	IMEL	85	179.5
T40 - 40004293	Trasfo Project	80	156.5
T40 - 40004293	Intermagnetics	87.5	156.5
T40 - 40004293	IMEL	86	156.5
T40 - 40000247	Trasfo Project	113	156.5
T40 - 40000247	Intermagnetics	87.5	131.5
T40 - 40000247	IMEL	60.5	156.5
T40 - 40004292	Trasfo Project	75	106.5
T40 - 40004292	Intermagnetics	80	106.5
T40 - 40004292	IMEL	62	131.5
T40 - 40003990	Trasfo Project	112	131.5
T40 - 40003990	Intermagnetics	65	106.5
T40 - 40003990	IMEL	65	156.5
T40 - 40013395	Elettromil	114,5	131
T40 - 40013398	Elettromil	88,5	156

FOR THE ACRONYMS INDICATED IN THIS DRAWING PLEASE REFER TO THE ELECTRICAL SCHEMATIC 1724000372-EL-DG-00009

A85 - Position may vary due to given space
- Position kann aufgrund der vorliegenden Platzverhältnisse variieren

#	= option
#terminal	= for options see 80000611
#communication	= for options see 80000614
PE/#PE	= for assembly see 80000619

Rev.	Alteration	Date	Name	Origin
37	5000000000266	20.02.2022	BESE	
36		03.07.2020	MK	
35		03.07.2020	MK	
34		16.04.2020	PA	
33		14.08.2019	SIK	
32		31.07.2018	MK	
31		13.12.2016	SIK	
30		15.07.2016	SIK	

Protect 8

Free size tolerances DIN ISO 2768 m — Surfaces

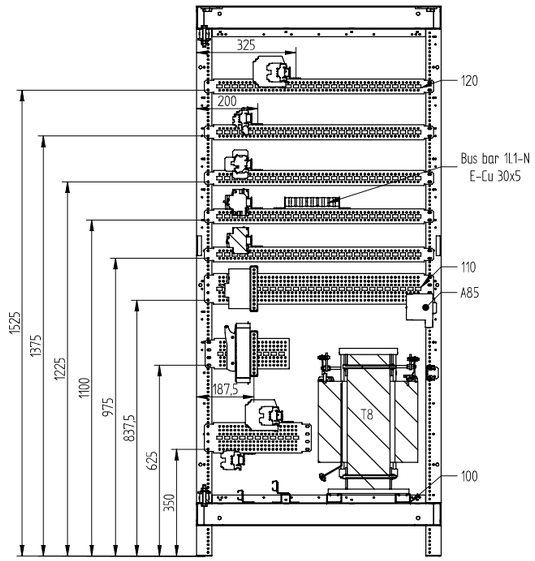
	Date	Name
Editor	15.02.2022	B.Schulte
Check	16.03.2022	M.Wasche
Norm.		

AEG POWER SOLUTIONS

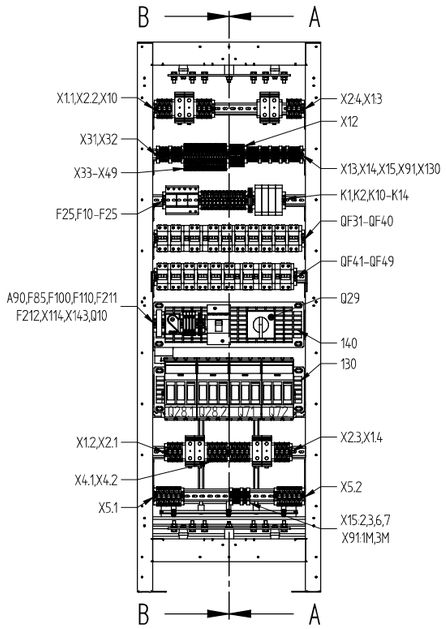
Scale: 150 — Mass: 6296 kg
Material:
Blank:
Protect 8.33/40-400-216-400-H18
Protect 8.33/40-400-216-400-H18
3AD000 — A1 — Page 1
20001274_MTL_EN-07 — en — 1 Pa.
repl.for: 1000003406 — Repl.by:

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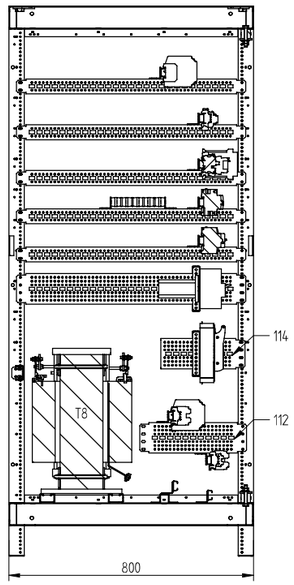
SECTION A–A
SIDE RIGHT INTERNAL VIEW



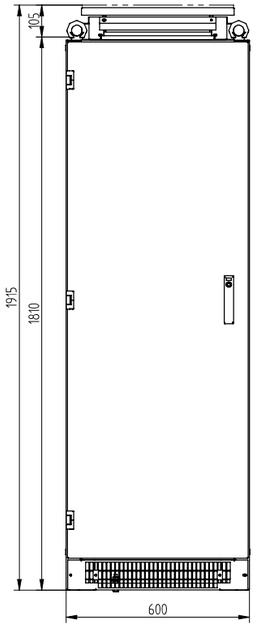
FRONT INTERNAL VIEW



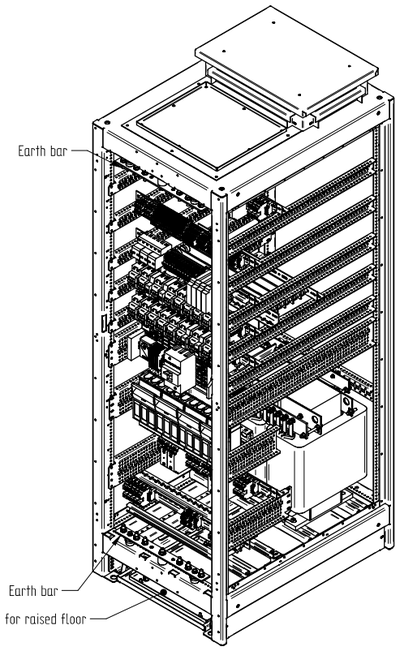
SECTION B–B
SIDE LEFT INTERNAL VIEW



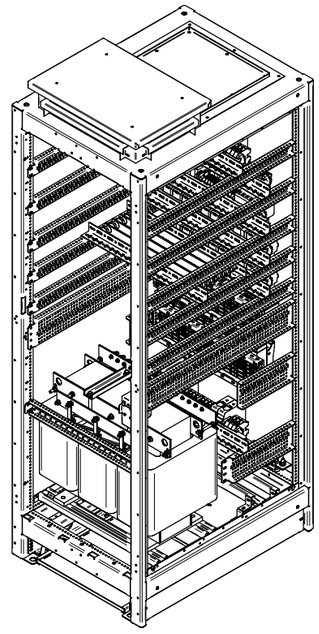
FRONT VIEW WITH DOOR



ISO FRONT VIEW



ISO REAR VIEW



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14188.020 AC BY-PASS - TAG: BY-200F3			Free size tolerances	Surfaces	Scale 1:10 Mass:
					–
					–
				Date / Name	Bypass Trans. Schrank 40kVA 400/400V
			Editor	10.07.2024 F.Mutter	Bypass Trans. Cabinet 40kVA 400/400V
			Check	17.07.2024 D.Regner	
			Norm.		
					A1 Page 1
01	10.07.2024	MU	AEG POWER SOLUTIONS		10009757_MTL_EN-01 en 1 Pg.
Rev.	Alteration	Date / Name	Origin		repl.for: repl.by:

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CAE EPLAN Electric P8

AUXILIARY
From Lighting & Small Power DB BOP DP-200N1
(Cubicle 03-Q41)
100-240V/N/PE~50/60Hz
back-up fuse gG10A 3G2.5mm2

LINE A
From LV Switchgear SG-200N1
(Cubicle A3/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

From LV Switchgear SG-200N1
(Cubicle A7/02)
Bypass mains 400V;3/PE~50Hz
gG63A 4G35mm2

LINE B
From LV Switchgear SG-200N1
(Cubicle A4/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

Not included in the AEG shipment

+MBC1
BY-200F3
Bypass transformer cabinet 40 kVA
1000007888.020
10009757

-Q10 L=80/65A I=0,8kA Icu=50kA
-T8 400V/400V/ 40kVA
-A85
-H1
-Q28.1 NC
-Q28.2 NC

+UPS1
BC-200F3A
Protect 8.33 40-400-210-400
1000007888.010
10009756

+UPS2
BC-200F3B
Protect 8.33 40-400-210-400
1000007888.010
10009756

-Q1 L=100/85A I=1,0kA Icu=50kA
-T40
-A1 REC
-A2 INV
-T1
-F1,-F2,-F3
-A3 SBS
-A4
-A18 Display
-A20 Parallel Adapter
INV CAN -X3 1-3
INV Sync -X5 1-4
-L11,-L12,-L13 Parallel preventive choke coil
-A24.1 BLÜ-PRO
-F91
-A12 ,-A13 Remote signaling

-Q29 INV operation Manual bypass
-F25
DP-200F3
-QF31 B32A 300mA
-QF32 B32A 300mA
-QF33 B32A 300mA
-QF34 B16A 300mA
5pc
-QF38 B16A 300mA
-QF39 B10A 300mA
4pc
-QF42 B10A 300mA
-QF43 B10A
8pc
-QF50 B10A
-QF51 B6A
-QF52 B6A

Not included in the AEG shipment
max. gG16A
Load 400/230V;3/N/PE~50Hz

+BFB1
CB-200F3A
Battery fuse box 200 A
-Q2 L=200A
DC 24V/ max. 300W

+BFB2
CB-200F3B
Battery fuse box 200 A
-Q2 L=200A
DC 24V/ max. 300W

+BAT1
BA-200F3A
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

+BAT2
BA-200F3B
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

2(1x70 mm2)

Code	Description
Q1	Rectifier input mains breaker
T40	Rectifier input isolation transformer
A1	Rectifier
A2	Inverter
T1	Inverter output isolation transformer
A3-A4	Static by-pass switch
A18	Display control module
A85	Heater
H1	Light

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors) attached.
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

*2 Connection cables are not included.

1000007888_010

					Date	14.05.2024			
01	500000002053	13.08.2024	Beckschäfer	Editor	IEC	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	System 40 kVA	
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck				
Stat	Alteration	Date	Name	Norm				Single-line diagram	

1000007888_010 en | A0 | sheet 1 | sheets 1

S-701D Data Sheet for
AC Uninterruptible Power Systems (UPS) (IEC 62040-3)

JIP33 JOINT INDUSTRY PROGRAMME

Row							Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
5		**GENERAL**					
6	5.1.2	Vendor :	Input Data	AEG Power Solutions			
7	5.1.2	Order status :	for purchase	Noted			
8	5.1.2	Purchase order number, date :	1724000372 123A90A rev1 dated 22/4/2024	Noted			
9	5.1.2	Manufacturer :	Input Data	AEG Power Solutions			
10	5.1.2	Model number :	Input Data	2 x Protect 8.33 S10 40kVA			
11	5.1.2	Serial number :	Input Data	Released after production			
12	5.2.3	Application :	industrial	Noted			
13	5.3.3	Purchaser specified rated output power :	35	40kVA	kVA		
14	5.1.1	Quantity :	1	Confirmed. Redundant system			
15		Conformity assessment system (CAS) level :	D	Noted			
16		**CONFIGURATION**					
17	5.1.1, A.1, Figure A.2, Figure A.3A, Figure A.3B, Figure A.6	UPS configuration :	simplified parallel UPS with common bypass & common output-Figure A.3A	Confirmed			
18	5.1.1, B.1	UPS topology :	double conversion	Confirmed			
19	5.1.1	Static switch configuration :	in both inverter and bypass path	Confirmed			
20	5.4.2.3	Battery configuration :	2 x 50%	Confirmed. 15 min. autonomy each battery			
21	5.3.2, 5.3.4	Performance classification :	manufacturer to advise	-			
22	8.1.1.3	Bi-directional rectifier :	No	Not applicable			
23	8.4.2.11	Remote access required :	Yes (read only)	Confirmed. Modbus TCP			
24	8.4.2.11	Hardware (adapters, connectors, cables, etc.) required for remote access :	manufacturer to advise	Confirmed			
25	8.1.1.5, 8.1.1.6	On-line battery monitoring facility required :	string monitoring	Confirmed			
26	8.1.1.4	On-line battery testing feature required :	No	Noted			
27	8.1.1.4	Battery test load interface :	No	Noted			
28	5.4.2.3	DC earth leakage monitoring required :	No	Noted			
29	7.4.14	Single line diagram and status display :	on HMI	LCD display with synoptic			
30	8.1.2.11	Black start feature required :	Yes	Confirmed			
31	8.1.1.1	Earth screen required for isolation transformer :	manufacturer to advise	Confirmed on the by-pass isolation transformer			
32		**PHYSICAL ASPECTS**					
33	7.2.1	Mounting :	floor mounting	Confirmed			
34	7.2.1	Overall cabinet dimensions - length :	manufacturer to advise	900 + 600 + 900 mm	mm		
35	7.2.1	Overall cabinet dimensions - depth :	manufacturer to advise	860 mm	mm		
36	7.2.1	Overall cabinet dimensions - height :	manufacturer to advise	1915 mm	mm		
37	7.2.1	Reference outline drawing number :	Input Data	1724000372-EL-DA-00004			
38	7.2.1	Total UPS cabinet mass :	manufacturer to advise	2258 kg	kg		
39	7.2.1	Total UPS mass with batteries (if integrated) :	manufacturer to advise	Batteries not integrated	kg		
40	7.2.4, 7.2.5	Cable entry location :	top	Confirmed. Through by-pass cabinet by means of cable glands			
41	7.2.4, 7.2.5	Cable entry type :	removable - undrilled plate	Confirmed			
42	7.2.4, 7.2.5	Gland plate material :	manufacturer standard	Steel			
43	7.2.1	Paint colour :	supplier standard	RAL7035			
44	7.2.1	Canopy for cabinet required :	No	Noted			
45	7.3.9	Document holder :	Yes	Confirmed			
46		**INSTALLATION**					
47	4,1	Site :	offshore - fixed	Noted. Painting class C3-H			
48	4,1	Location of UPS cabinet installation :	indoor	Noted			
49	7.3.1, 7.3.2	Front access clearance dimensions for operation and maintenance :	800	Noted	mm		
50	7.3.2	Side clearance for ventilation (if required) :	manufacturer to advise	0	mm		
51	7.3.2	Rear clearance for ventilation (if required) :	manufacturer to advise	100 mm	mm		
52	7.2.3, 7.9.3	Installed location of battery :	inside UPS room	Battery housed on rack			
53	7.2.3	Maximum battery assembly dimensions (L x D x H):	manufacturer to advise	Battery rack 1050 x 725 x 1032	mm		
54		**SAFETY**					
55	5.1.1	Accessibility :	operator access area	Front access			
56	5.1.1	Key required for cabinet :	Yes	Confirmed			
57	7.2.2	Degree of protection (with closed doors) :	IP31	IP43			
58	7.2.2	Degree of protection (with open doors) :	IP2X	Confirmed			
59	7.7.5	Cooling fan replacement while UPS in service :	No	Noted			
60	5.1.2	Local language for caution/danger/warning labels :	English	Confirmed			
61		**ELECTROMAGNETIC COMPATIBLITY**					
62	5.1.4	Emission :	UPS Cat C3	Confirmed			
63	5.1.4	Immunity :	UPS Cat C3	Confirmed			
64		**ENVIRONMENTAL CONDITIONS**					
65	4.2.1.1	Minimum ambient temperature (operation) :	-8,4	Confirmed with heater option included	°C		
66	4.2.1.1	Maximum ambient temperature (operation) :	40	Confirmed	°C		
67	4.2.1.1	Maximum relative humidity (operation) :	95	Confirmed. Not condensing	%		
68	4.2.1.1	Temperature at which relative humidity is specified (operation) :	Input Data	-	°C		
69	4.2.1.2	Maximum altitude (operation) :	Sea level	Noted	m		
70	4.2.2.1	Minimum ambient temperature (storage and transportation) :	-5	Noted	°C		
71	4.2.2.1	Maximum ambient temperature (storage and transportation) :	40	Noted	°C		
72	4.2.2.1	Maximum relative humidity (storage and transportation) :	95	Noted	%		
73	4.2.2.1	Temperature at which relative humidity is specified (storage and transportation) :	Input Data	-	°C		
74	4.3.2	Seismic requirement data :	Zone 2	Noted			
75	4.2.2.1	Storage site of UPS :	indoor – natural ventilation	Noted			
76	4.3.2	Additional or unusual conditions (operation) :	Input Data	Not applicable			
77	4.3.3	Additional or unusual conditions (storage and transportation) :	Input Data	Not applicable			
78	5.1.5	Acoustic noise at 1 m - normal mode :	70	< 65 dB(A)	dBA		
79	5.1.5	Acoustic noise at 1 m - stored energy mode :	70	< 65 dB(A)	dBA		
80		**COMMUNICATION INTERFACE(S)**					
81	5,6	(1) Interface media for SCADA (ICSS / DCS) :	serial	Modbus TCP + relays			
82	5,6	(1) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
83	5,6	(1) Interface protocol for SCADA (ICSS / DCS) :	Modbus	Modbus TCP + relays			
84	5,6	(2) Interface media for electrical management / control system :	serial	Modbus TCP + relays			
85	5,6	(2) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
86	5,6	(2) Interface protocol for electrical management / control system :	Modbus	Modbus TCP + relays			
87	5,6	(3) Remote access / monitoring software required:	Yes	Noted			
88	5,6	(3) Interface media for remote access / monitoring:	ethernet (fiber)	Noted			
89	5,6	(3) Maximum allowable length of communication cable (for copper) :	Input Data	25 m	m		
90	5,6	(3) Interface protocol for remote access / monitoring :	Modbus	Modbus TCP + relays			
91		**AC INPUT SPECIFICATIONS**					
92	5.2.1	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
93	5.2.1	Voltage (steady state, R.M.S) - tolerance :	+/- 10	Confirmed	%		
94	5.2.1	Frequency - rated :	50 Hz	Confirmed			
95	5.2.1	Frequency - tolerance :	+/- 2	Confirmed	%		
96	5.2.2	Phases required :	3	3			
97	5.2.2	Neutral required :	Yes	Confirmed. Neutral not required for the rectifier supply			
98	5.2.2	Current (R.M.S) - rated (with the energy storage device charged) :	manufacturer to advise	71,2A	A		
99	5.2.2	Power factor :	manufacturer to advise	Data not characterized by the factory. Measurable on request			
100	5.2.2	In-rush (% of rated current) :	manufacturer to advise	Typically 10 x In	%		
101	5.2.2	In-rush (time) :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
102	5.2.2	Maximum current (with low input volt and energy storage device charging) :	manufacturer to advise	92A at 400Vac	A		
103	5.2.2	Time for overload (125 % of rated current) :	10	Confirmed	min		
104	5.2.2	Time for overload (150 % of rated current) :	1	Confirmed	min		
105	5.2.2	Total harmonic distortion - current (THD p.u.) :	8	Confirmed. The AC UPS works with an input voltage harmonic distortion ≤ 8%	%		
106	5.2.3	Short circuit current of the input supply (Minimum and Maximum) :	50	Confirmed. The charger is equipped with an input MCCB (Q1) with Isc = 50kA	kA		
107	5.2.2	Minimum short circuit current :	Input Data	Data not characterized by the factory. Measurable on request	kA		
108	5.2.2	Earth leakage current :	Input Data	Data not characterized by the factory. Measurable on request	mA		
109	5.2.2	AC power distribution system - compatibility :	TN-S	Confirmed			
110	5.2.3	Additional or unusual conditions :	Input Data	Not applicable			
111	5.2.3, 7.5.4	Cable size (cross-section area) - input mains :	Input Data	min 50 sqmm - max 2x95 sqmm	sq.mm.		
112	5.2.3, 7.5.4	Cable size (cross-section area) - input bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
113	5.2.3, 7.5.4	Cable size (cross-section area) - input maintenance bypass :	Input Data	min 16 sqmm - max 2x95 sqmm	sq.mm.		
114	7.4.8, 8.1.1.1	Input isolation transformer required :	Yes	Confirmed			
115	7.4.10	Input isolation transformer winding :	supplier standard	Aluminium			
116		**DC AND BATTERY SPECIFICATIONS**					
117	5.4.2.2	DC voltage level :	220	Confirmed	V d.c.		
118	5.4.2.2	Design life :	5	> 12 years	years		
119	5.4.2.2	Float service life :	manufacturer to advise	Dependent from temperature	years		
120	5.4.2.2	Shelf life of battery :	manufacturer to advise	3 months	months		
121	5.4.2.2	Quantity of cells and strings :	manufacturer to advise	18 blocks - 1 string	nos.		
122	5.4.2.2	Nominal voltage (total) :	manufacturer to advise	216V	V d.c.		
123	5.4.2.2	Battery technology :	sealed nickel cadmium	Lead-Acid VRLA GEL			
124	5.4.2.2	Nominal AH capacity :	manufacturer to advise	150Ah	AH		
125	5.4.2.2	Discharge rate (C-rate) :	Select	C20			
126	5.4.2.2	Electrolyte fill status :	manufacturer standard	Not applicable			
127	8.1.2.3	Purchaser's requirement (% of battery recharge level - 1) :	80	Confirmed with charging current limited to 0,1C	%		
128	8.1.2.3	Purchaser's requirement (time for battery recharge level - 1) :	10	Confirmed	Hours		
129	8.1.2.3	Purchaser's requirement (% of battery recharge level - 2) :	100	Data not characterized by the factory. Measurable on request	%		
130	8.1.2.3	Purchaser's requirement (time for battery recharge level - 2) :	24	Data not characterized by the factory. Measurable on request	Hours		
131	5.4.2.2	Stored energy time (Autonomy time at 100% rated load) :	30	Confirmed with both batteries	min		
132	5.4.2.2	Restored energy time (recharge time to 80% capacity):	manufacturer to advise	10h	hours		
133	5.4.2.2	Ambient reference temperature :	40	Confirmed	°C		
134	5.4.2.2	Earth condition/isolation :	manufacturer to advise	floating			
135	5.4.2.2	Ripple current (R.M.S) :	manufacturer to advise	< 2% RMS	%		
136	5.4.2.2	Nominal discharge current (stored energy mode):	manufacturer to advise	-	A		
137	5.4.2.2	DC Fault current rating :	manufacturer to advise	Data not characterized by the factory. Measurable on request	A d.c.		
138	5.4.2.2	Cable volt drop recommendation (≤ % at nominal discharge current) :	manufacturer to advise	2%	%		
139	5.4.2.2	Charging regime :	manufacturer to advise	Constant voltage, current limited			
140	5.4.2.2	Charge voltage (float) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
141	5.4.2.2	Charge voltage (boost) and tolerance band :	manufacturer to advise	2,28Vcell - 13,5 / 13,8 Vblock	V d.c.		
142	5.4.2.2	Charge voltage (equalising) and tolerance band :	manufacturer to advise	Not applicable to VRLA batteries	V d.c.		
143	5.4.2.2	Minimum end of discharge voltage :	manufacturer to advise	178,2V	V d.c.		
144	5.4.2.2	Charge current limit (or range) :	limitation of batteries charging to 30% of the UPS sizing	15A (0,1C)	A d.c.		
145	5.4.2.2	Temperature compensated charging required:	Yes	Confirmed			
146	5.4.2.3	Battery isolation box required :	Yes	Confirmed			
147	5.4.2.3	Additional or unusual conditions :	Input Data	Not applicable			
148	5.4.2.3	Load profile for battery design, attached :	No	Noted			
150		**BATTERY ROOM**					
151	4.2.1.1	Minimum ambient reference temperature :	-8,4	-8,4°C (used for battery sizing)	°C		

Row		S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)					Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
152	4.2.1.1	Maximum ambient reference temperature :	40	+40°C (used for battery sizing)	°C		
153	5.4.2.1	Area classification :	safe	Noted			
154	5.4.2.1	Hazardous area classification :	Zone 2	Noted			
155	5.4.2.1	Minimum gas subdivision and temperature class (for equipment in battery room) :	Select	-			
156	8.1.2.10	Temperature sensor (for VRLA / partial gas recombination batteries) :	Yes	Confirmed. Standard sensor			
157		**BATTERY ISOLATOR BOX SPECIFICATIONS**					
158	7.9.1	Enclosure material :	manufacturer standard	Aluminium alloy			
159	7.9.1	Mounting :	Select	Wall mounting			
160	7.9.1	Breathing valve required :	manufacturer to advise	No			
161	7.9.1	Internal earth bar :	tinned copper	-			
162	7.9.3	Minimum design temperature :	-8,4	Noted	°C		
163	7.9.3	Maximum design temperature :	40	Noted	°C		
164	7.9.3	Maximum relative humidity :	95	Noted	%		
165	7.9.3	Temperature at which relative humidity is specified:	Input Data	-	°C		
166	7.9.4	Degree of protection :	IP 31	IP65			
167	7.9.5	Area classification :	safe	Noted			
168	7.9.5	Hazardous area certification required :	none	-			
169	7.9.5	Hazardous area classification :	N/A	Not applicable			
170	7.9.5	Hazardous area level of protection :	N/A	Not applicable			
171	7.9.6	Cable entry :	top	Bottom with cable glands			
172	7.9.6	Cable indirect entry via 'ex e' enclosure :	No	Not applicable			
173	7.9.6	Battery cable size (cross-section area) :	Input Data	70 sqmm armored cable class-2	sq.mm.		
174	7.9.6	Cable entry diameter in battery box (ISO metric) :	Input Data	22,6 mm			
175	7.9.7	Battery isolator type :	MCCB	Confirmed			
176	7.9.8	Rated current of breaker / switch fuse unit :	manufacturer to advise	200A	A		
177	7.9.8	Rated breaking current (Icu) - (if breaker used) :	manufacturer to advise	36kA	kA		
178	7.9.10	Breaker status potential free contact (NO) :	two	Confirmed			
179	7.9.9	Under voltage trip feature required :	Yes	Confirmed			
180	7.9.9	Under voltage trip coil for :	black start reserve	Confirmed			
181	8.1.2.12	ESD trip required :	Yes - via shunt trip	Yes - through SIL relay			
182	8.1.2.12	ESD override key switch :	key captive in overridden position and with status contact	Confirmed			
183	7.9.9	Over voltage trip required :	Yes	Not applicable			
184		**AC OUTPUT SPECIFICATIONS**					
185	5.3.2	Rated output power (apparent) :	35	40kVA	kVA		
186	5.3.2	Rated output power (active) :	28	32kW	kW		
187	5.3.2	AC power distribution system - compatibility :	TN-S	Noted			
188	5.3.2	Phases available :	3	Confirmed			
189	5.3.2	Neutral available :	Yes	Confirmed			
190	5.3.2	Voltage (steady state, R.M.S) - rated :	400	Confirmed	V		
191	5.3.2	Voltage - normal mode variation :	manufacturer to advise	+/- 1%	%		
192	5.3.2	Voltage - storage energy mode variation :	manufacturer to advise	+/- 1%	%		
193	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - linear :	5	< 3%	%		
194	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - normal mode - non linear :	5	Confirmed	%		
195	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - linear :	5	< 3%	%		
196	5.3.2, 8.2.3	Total harmonic distortion (V), 100% load - storage energy mode - non linear :	5	Confirmed	%		
197	5.3.2	% Voltage unbalance, 100% load unbalance :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
198	5.3.2	Phase angle displacement, 100% load unbalance:	manufacturer to advise	Data not characterized by the factory. Measurable on request	°		
199	5.3.2	% Voltage transient, 100% step load - linear :	manufacturer to advise	+/- 2%	%		
200	5.3.2	Voltage transient recovery time, 100% step load - linear :	manufacturer to advise	2 ms	s		
201	5.3.2	% Voltage transient, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
202	5.3.2	Voltage transient recovery time, 100% step load - non linear :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
203	5.3.2	% Voltage transient, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
204	5.3.2	Voltage transient recovery time, 100% step load - transfer normal mode to storage energy mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
205	5.3.2	% Voltage transient, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	%		
206	5.3.2	Voltage transient recovery time, 100% step load -transfer storage energy mode to normal mode :	manufacturer to advise	Data not characterized by the factory. Measurable on request	s		
207	5.3.2	Frequency (steady state) - rated :	50	Confirmed	Hz		
208	5.3.2	Frequency (steady state) - normal mode variation:	2	+/- 0,1%	%		
209	5.3.2	Frequency (steady state) - storage energy mode variation :	2	+/- 0,1%	%		
210	5.3.2	Frequency (steady state) - free running variation:	2	+/- 0,1%	%		
211	5.3.2	Synchronization (maximum ± % range of rated frequency) :	manufacturer to advise	-	%		
212	5.3.2	Maximum synchronism phase error (referred to 360° cycle) :	manufacturer to advise	-	%		
213	5.3.2	Maximum slew rate :	manufacturer to advise	-	Hz/s		
214	5.3.2	Current (R.M.S) - rated :	manufacturer to advise	58A	A		
215	5.1.8.1, 5.3.2	Current (R.M.S) - overload capability (% of rated current for ten minutes) :	manufacturer to advise	125%	%		
216	5.1.8.2, 5.3.2	Current (R.M.S) - overload capability (% of rated current for one minute) :	manufacturer to advise	150%	%		
217	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (% of rated current) :	manufacturer to advise	3,68 x In (1ph) - 2,02 x In (3ph)	%		
218	5.1.8.3, 5.1.8.4	Current (R.M.S) - short circuit capability (time duration) :	manufacturer to advise	500 ms	s		
219	5.3.2	Current (R.M.S) - limitation (% of rated current) :	manufacturer to advise	-	%		
220	5.3.2	Current (R.M.S) - limitation (time duration) :	manufacturer to advise	-	s		

Row	S-701D Data Sheet for AC Uninterruptible Power Systems (UPS) (IEC 62040-3)						Issue
2	Tag No. :	UP-200F3					
3	Service :	AC UPS PAS					
4	Ref. Clause	Description	Project Requirement	Manufacturer Declared Values	Unit	Additional notes	
221	5.3.2	Current (R.M.S) - fault clearing capability (normal mode) :	manufacturer to advise	-	A		
222	5.3.2	Current (R.M.S) - fault clearing capability (stored energy mode) :	manufacturer to advise	-	A		
223	5.3.2	Load power factor - rated :	manufacturer to advise	0,8			
224	5.3.2	Load power factor - displacement (permissible limit lead) :	manufacturer to advise	Cap - 1 - Ind			
225	5.3.2	Load power factor - displacement (permissible limit lag) :	manufacturer to advise	Cap - 1 - Ind			
226	5.3.2	Efficiency in normal mode - 100% load :	manufacturer to advise	86,4%	%		
227	5.3.2	Efficiency in normal mode - 75% load :	manufacturer to advise	87,3%	%		
228	5.3.2	Efficiency in normal mode - 50% load :	manufacturer to advise	87,2%	%		
229	5.3.2	Efficiency in normal mode - 25% load :	manufacturer to advise	83,8%	%		
230	7.4.8	Output isolation transformer required :	No	Yes. Output transformer is included in AEG standard design			
231	7.4.10	Output isolation transformer winding :	Select	Aluminium			
232	7.6.5	AC output neutral earth link :	earthed	Noted. Externally			
233	7.1.6	Reference document to AC output distribution board :	To see Electrical Load List	Noted			
234	5.3.3	Integrated AC output distribution board with MCBs:	Yes	Confirmed			
235	5.3.3	Cable size (cross-section area) - output:	manufacturer to advise	min 16 sqmm - max 2x95 sqmm	sq.mm.		
236		**BYPASS SPECIFICATIONS**					
237	C.3	Bypass transfer time :	manufacturer to advise	0	msec		
238	C.3	Bypass static switch rated current :	manufacturer to advise	40kVA - 58A	A		
239	C.3	Bypass protection fuse or circuit breaker rating :	manufacturer to advise	MCCB 65A	A		
240	7.4.8	Bypass transformer required :	Yes	Confirmed			
241	7.4.10	Bypass transformer winding :	copper or aluminum	Aluminium			
242	7.3.5	Maintenance bypass and bypass transformer location:	integrated	Manual by-pass integrated			
243	8.3.6, C.5	Overall maintenance bypass :	internal	Q29 manual by-pass integrated			

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	84330-CEC	: Isolator Battery Box for AC UPS 35 kVA / AC UPS 35 kVA Redundant System with By-Pass			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10002343		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX10 Multicore Electrical Control Cable

CABLE DATA

Type: Cu Cl.2/XLPE/LSZH | Cores/Size mm²: 7X1,5 mm2 | Color: GREY

From: CB-200F3A | To: BC-200F3A

1	Check cable physical integrity	OK
2	Check cable data against latest cable schedule.	OK
3	Check cable routing against latest drawings (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to latest project Specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Check cable and core marking against latest drawings	PL
7	Check cable labelling is in accordance with latest specification.	PL
8	Check cable glands suit for cable type and are in accordance with latest specification.	OK
9	Check terminations are in accordance with latest termination diagram.	PL
10	Check cable earthing against lastest drawings.	OK
11	Check gland plate for single core cables is non magnetic.	NA
12	If required produce Red Line Mark Up for "AS BUILT"	

CONTINUITY	CORE 1 / All cores+screen+armour+earth	0.4
	CORE 2 / All cores+screen+armour+earth	0.4
	CORE 3 / All cores+screen+armour+earth	0.4
	CORE 4 / All cores+screen+armour+earth	0.4
	CORE 5 / All cores+screen+armour+earth	0.4
	CORE 6 / All cores+screen+armour+earth	0.4
	CORE 7 / All cores+screen+armour+earth	0.4
	CORE 8 / All cores+screen+armour+earth	NA
	CORE 9 / All cores+screen+armour+earth	NA
	CORE 10 / All cores+screen+armour+earth	NA

INSULATION	CORE 1	>999
	CORE 2	>999
	CORE 3	>999
	CORE 4	>999
	CORE 5	>999
	CORE 6	>999
	CORE 7	>999
	CORE 8	NA
	CORE 9	NA
	CORE 10	NA
	SCREEN	NA
	EARTH	NA
	ARMr	NA
	TEST VOLTS	1000

TESTING INSTRUMENTS USED

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

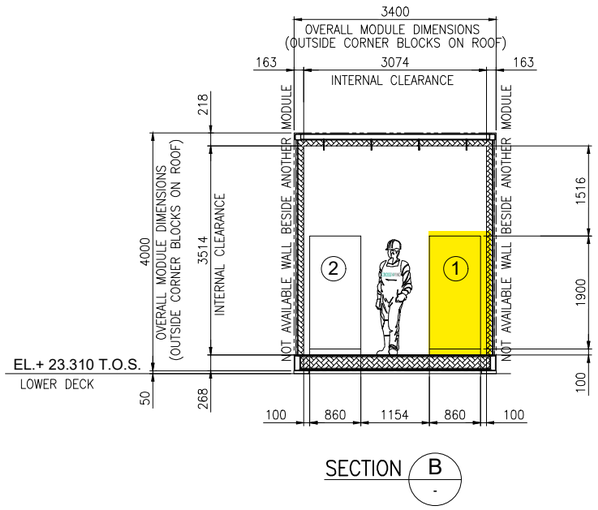
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Page 1/1

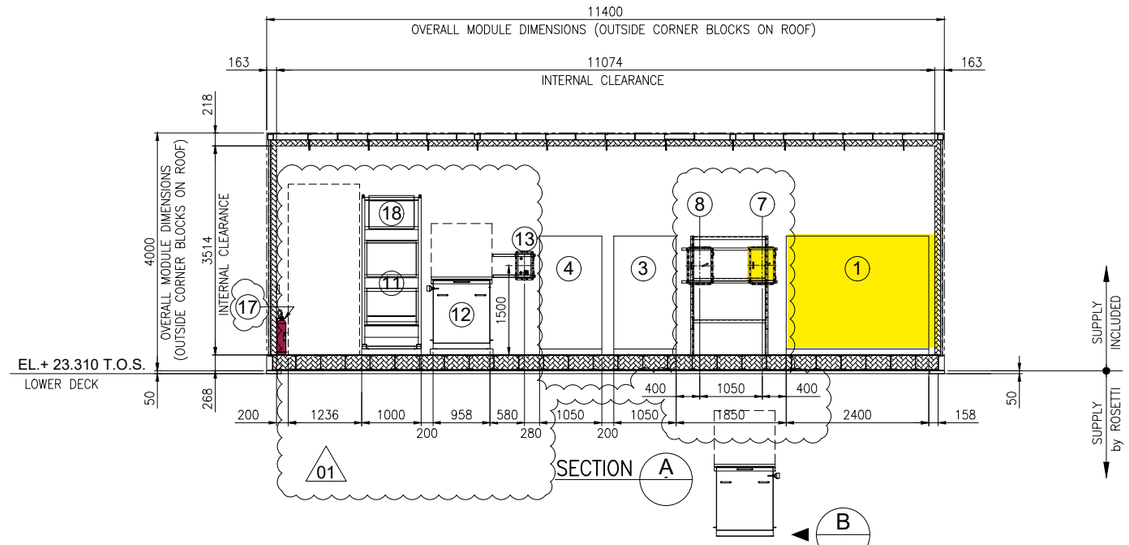
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-21	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-21T17:27:14.539Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:52:16.001Z	

DRAWING NO. 123A90-DDL-EL-DL-20106

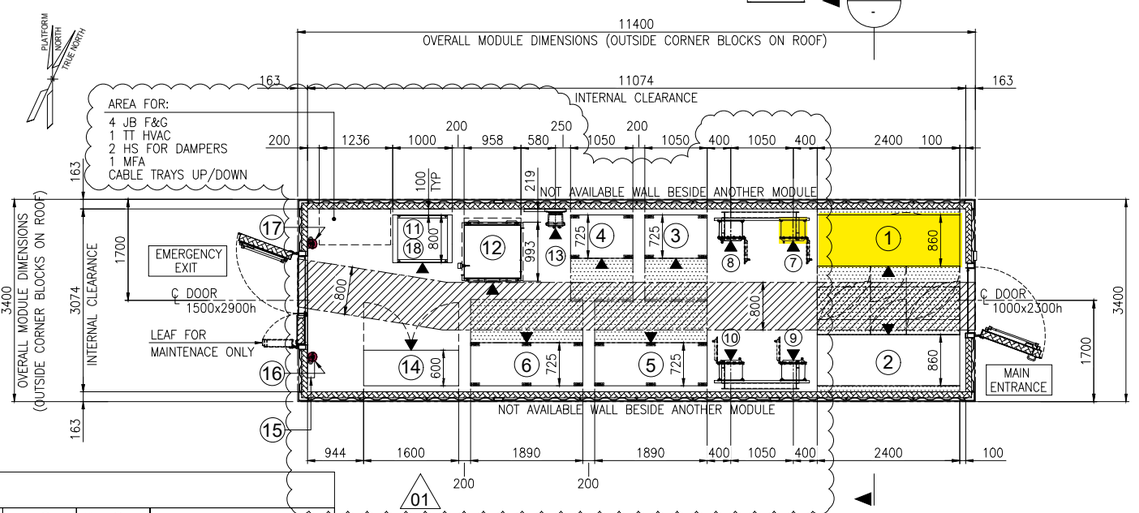
REV. 01



SECTION B



SECTION A



A

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

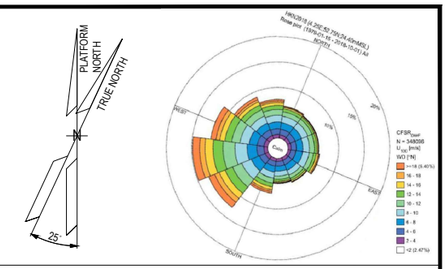
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20106**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

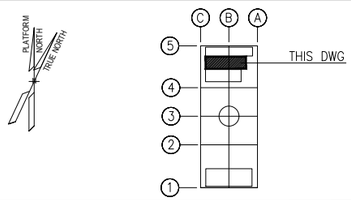
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24

A1 | DRAWING NO. 123A90-DDL-EL-DL-20106 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

FROM	TO

DESCRIPTION: DC UPS - BATTERY ISOLATOR
TAG NUMBER: CB-200F1

COLUMN: -

-X3

BATTERY BREAKER STATUS	X3 / 1	1
	X3 / 3	2
BATTERY BREAKER STATUS	X3 / 5	3
	X3 / 4	4
		5
		6
		7

BK — 84111-CEC 7C X 1.5 mm² — BK

DESCRIPTION: DC UPS - CHARGER
TAG NUMBER: BC-200F1B (UP-200F1B)

COLUMN: -

-X32

1	X32 / 1	BATTERY BREAKER STATUS
2	X32 / 2	
3	X32 / 3	BATTERY BREAKER STATUS
4	X32 / 4	
5		
6		
7		

DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F3A

COLUMN: -

-X3

BATTERY BREAKER STATUS	X3 / 1	1
	X3 / 3	2
		3
		4
		5
		6
		7

BK — 84330-CEC 7C X 1.5 mm² — BK

DESCRIPTION: AC UPS PAS - CHARGER-A
TAG NUMBER: BC-200F3A

COLUMN: -

-X15

1	X15 / 4	BATTERY BREAKER STATUS
2	X15 / 5	
3		
4		
5		
6		
7		

01

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
SIGNALS FOR CONTROL SYSTEM

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 089

REV. 01

F.to UNI A3: 420mmx297mm

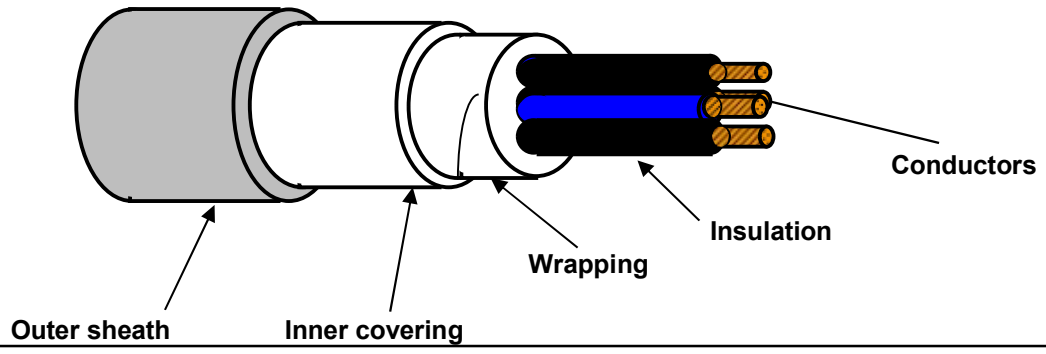
File Name : 123A90-DDL-EL-DG-20162 Rev. 01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84330-CEC	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	BC-200F3A	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	ELECV34-7X1,5	Cable Cu Cl.2/XLPE/LSZH 0,6/1kV 7Cx1,5mm² - Grey	T1_M25_Single			T1_M25_Single				L-300-101-LVT-056 / L-300-101-LVT-049 / L-600-101-LVT-036 / L-450-101-LVT-040

FLEI s.r.l.

Cu Cl.2/XLPE/LSZH 0,6/1 KV

7CX1,5 - CONTROL CABLE - Flame Retardant



TECHNICAL FEATURES

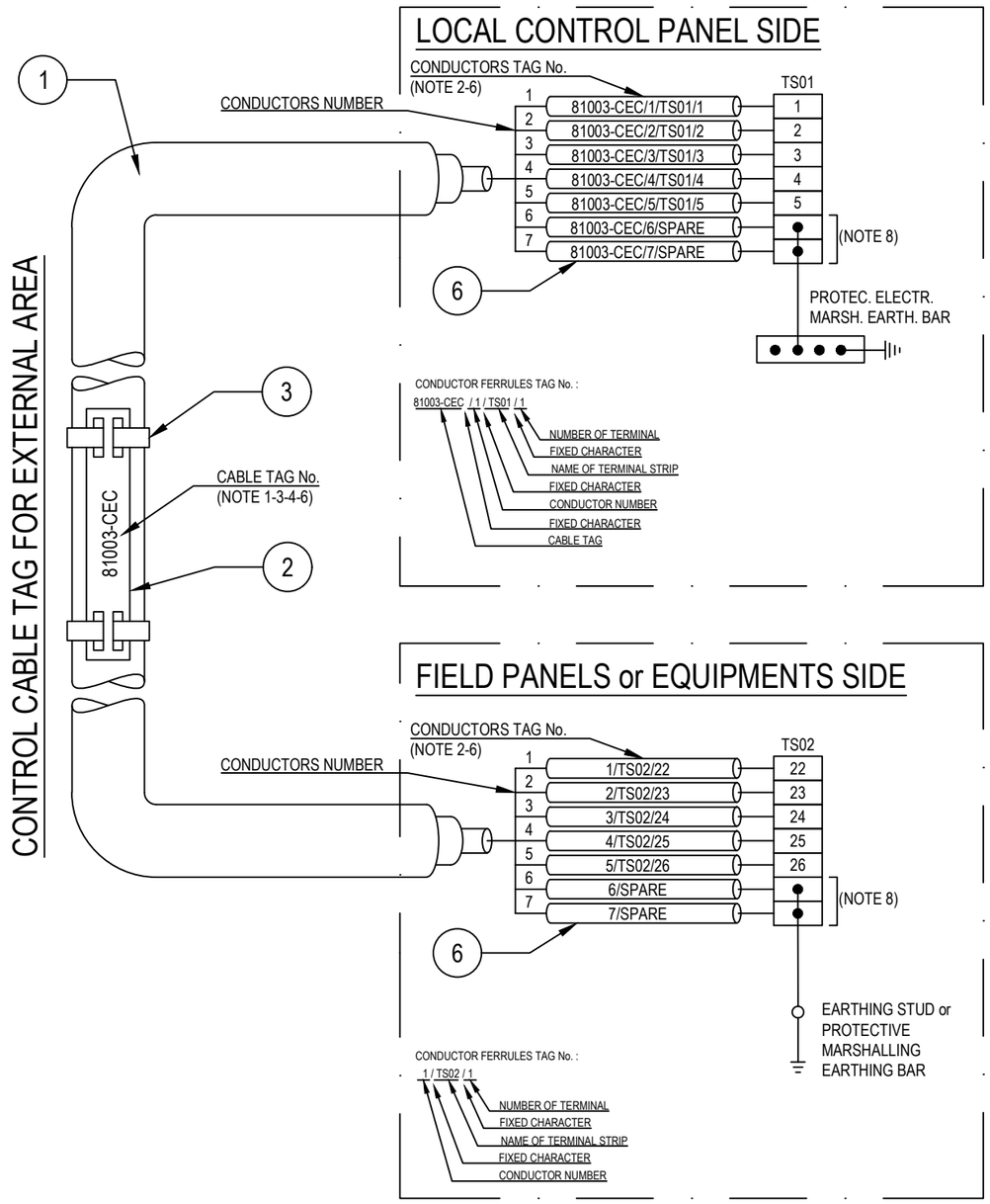
Conductors :	**STRANDED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	**XLPE** compound, quality to IEC 60092.360, Nominal Thickness 0,7 mm	
Cores colour code :	**Black NUMBERED (from 1 to 7)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Cores layed up with optimal lay length	
Overall Wrapping:	by plastic tape helically wound	
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 - 7CX1,5 SQMM - XLPE/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 -**	
	Year of Manufacture - CE + Meter Marking	
Outer diameter :	(13,5 ± 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 :	≥ 1000 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.

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C04



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 50 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.

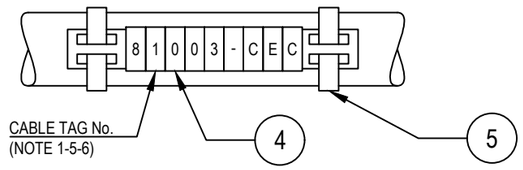
5) THE CABLE TAG FOR INTERNAL AREA SHAL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) THE EARTHING CONNECTION OF THE ARMOUR CABLE IS NOT APPLICABILE IF THE ARMOUR IS CONNECTED TO EARTH WITH METALLIC CABLE GLAND.
   WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
   - PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH RING
   - EARTHING BOSS AND EARTH RING
   - EARTH BAR AND EARTH BAR (IF ANY).

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.

CONTROL CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20092
REV.: 2_A | DATE: 28/08/24 | SIGNATURE: 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 CONTROL 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 008 | REV. 02

F.to UNI A3: 420mmx297mm

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

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	84331-CEC	: Isolator Battery Box for AC UPS 35 kVA / AC UPS 35 kVA Redundant System with By-Pass			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)			Module	LD_B-300
TASK	code	C10002344		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX10 Multicore Electrical Control Cable

CABLE DATA

Type	Cu Cl.2/XLPE/LSZH	Cores/Size mm²	7X1,5 mm2	Color	GREY
From	CB-200F3B	To	BC-200F3B		

1	Check cable physical integrity	OK
2	Check cable data against latest cable schedule.	OK
3	Check cable routing against latest drawings (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to latest project Specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Check cable and core marking against latest drawings	OK
7	Check cable labelling is in accordance with latest specification.	OK
8	Check cable glands suit for cable type and are in accordance with latest specification.	OK
9	Check terminations are in accordance with latest termination diagram.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check gland plate for single core cables is non magnetic.	NA
12	If required produce Red Line Mark Up for "AS BUILT"	

CONTINUITY	CORE 1 / All cores+screen+armour+earth	0.5
	CORE 2 / All cores+screen+armour+earth	0.5
	CORE 3 / All cores+screen+armour+earth	0.5
	CORE 4 / All cores+screen+armour+earth	0.5
	CORE 5 / All cores+screen+armour+earth	0.5
	CORE 6 / All cores+screen+armour+earth	0.5
	CORE 7 / All cores+screen+armour+earth	0.5
	CORE 8 / All cores+screen+armour+earth	NA
	CORE 9 / All cores+screen+armour+earth	NA
	CORE 10 / All cores+screen+armour+earth	NA
INSULATION	CORE 1	>999
	CORE 2	>999
	CORE 3	>999
	CORE 4	>999
	CORE 5	>999
	CORE 6	>999
	CORE 7	>999
	CORE 8	NA
	CORE 9	NA
	CORE 10	NA
	SCREEN	NA
	EARTH	NA
	ARMr	NA
	TEST VOLTS	1000

TESTING INSTRUMENTS USED

TYPE / SERIAL N° :	KEW3125A S/N: W8330207	TYPE / SERIAL N° :	FLUKE 175 S/N: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
TYPE / SERIAL N° :		TYPE / SERIAL N° :	
Calibration certificate N° and date:		Calibration certificate N° and date:	

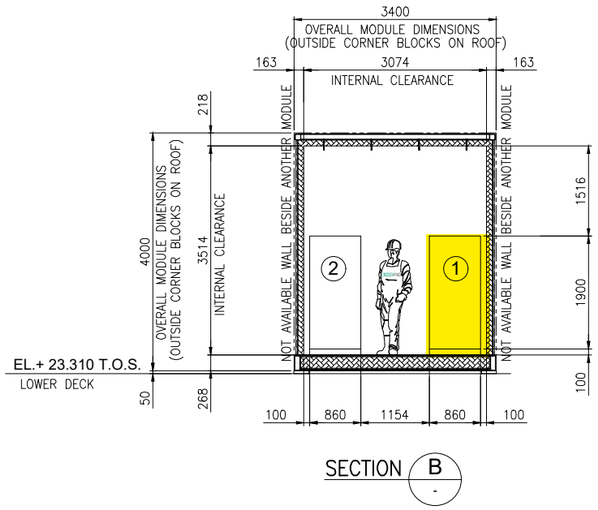
Comments:

Page 1/1

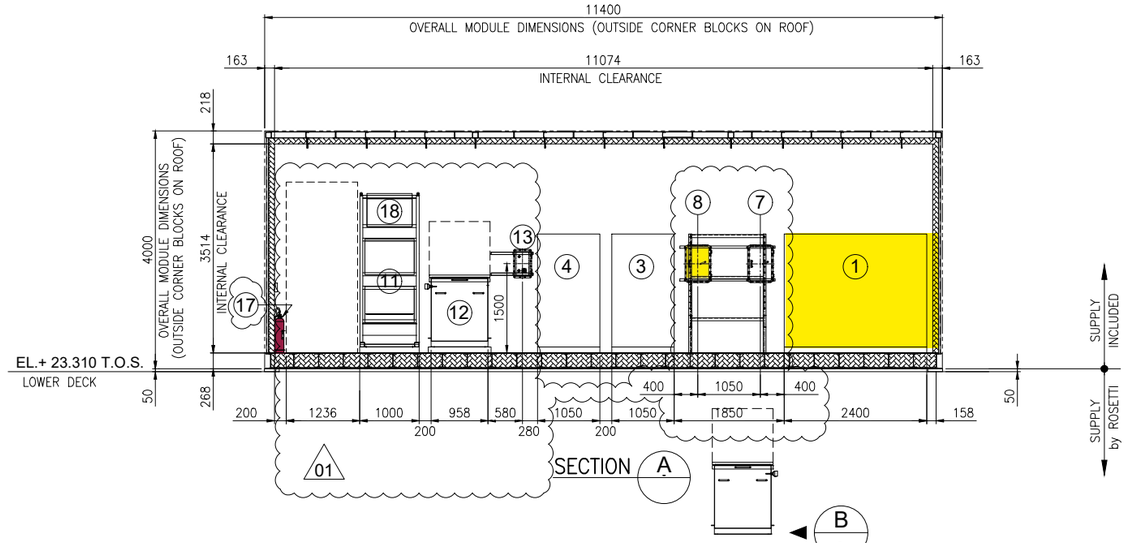
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-28	2024-11-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-28T09:15:13.234Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-02T10:53:05.606Z	

DRAWING NO. 123A90-DDL-EL-DL-20106

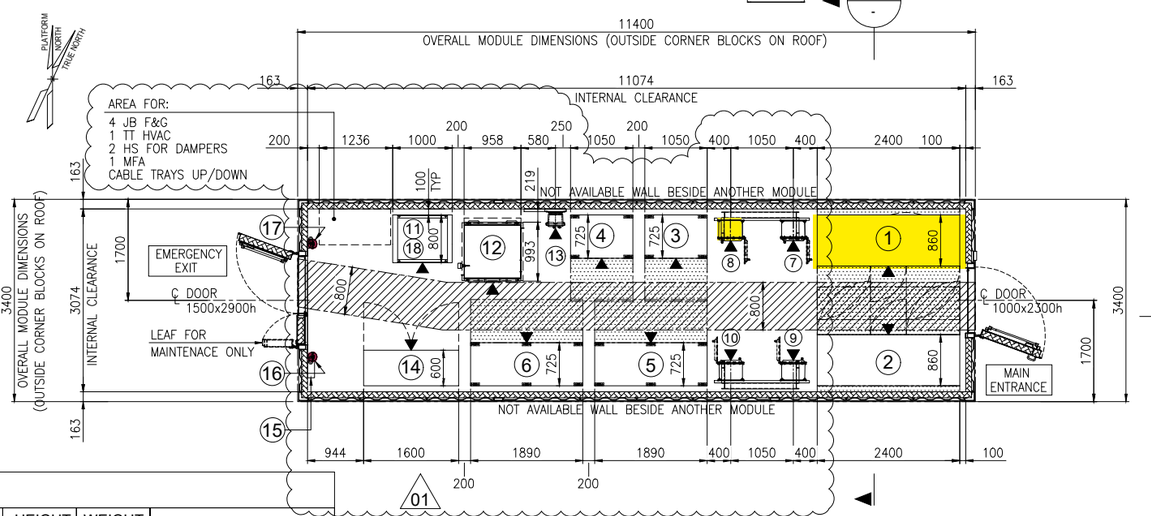
REV. 01



SECTION B -



SECTION A -



A -

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

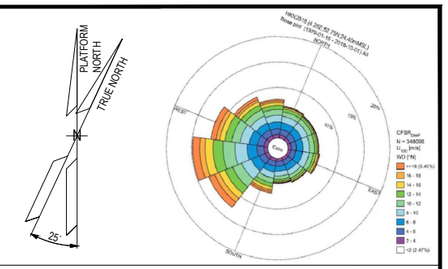
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

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   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

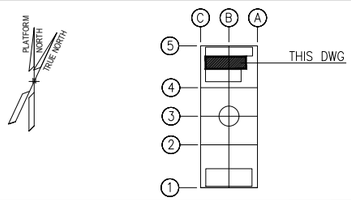
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24

A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

FROM	TO

DESCRIPTION: AC UPS PAS - BATTERY ISOLATOR-B
TAG NUMBER: CB-200F3B

COLUMN: -

-X3

BATTERY BREAKER STATUS

X3 / 4 — 1
X3 / 5 — 2
3
4
5
6
7

BK

84331-CEC
7C X 1.5 mm²

BK

DESCRIPTION: AC UPS PAS - CHARGER-B
TAG NUMBER: BC-200F3B

COLUMN: -

-X15

1 — X15 / 8
2 — X15 / 9
3
4
5
6
7

BATTERY BREAKER STATUS

DESCRIPTION: AC UPS F&G - BATTERY ISOLATOR-A
TAG NUMBER: CB-200F4A

COLUMN: -

-X3

BATTERY BREAKER STATUS

X3 / 1 — 1
X3 / 3 — 2
3
4
5
6
7

BK

84410-CEC
7C X 1.5 mm²

BK

DESCRIPTION: AC UPS F&G - CHARGER-A
TAG NUMBER: BC-200F4A

COLUMN: -

-X15

1 — X15 / 4
2 — X15 / 5
3
4
5
6
7

BATTERY BREAKER STATUS

01

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20149

REV.:	DATE:	SIGNATURE:
1_A	17/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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
SIGNALS FOR CONTROL SYSTEM

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

SCALE : 1:X

A3

DRAWING NO. 123A90-DDL-EL-DG-20149

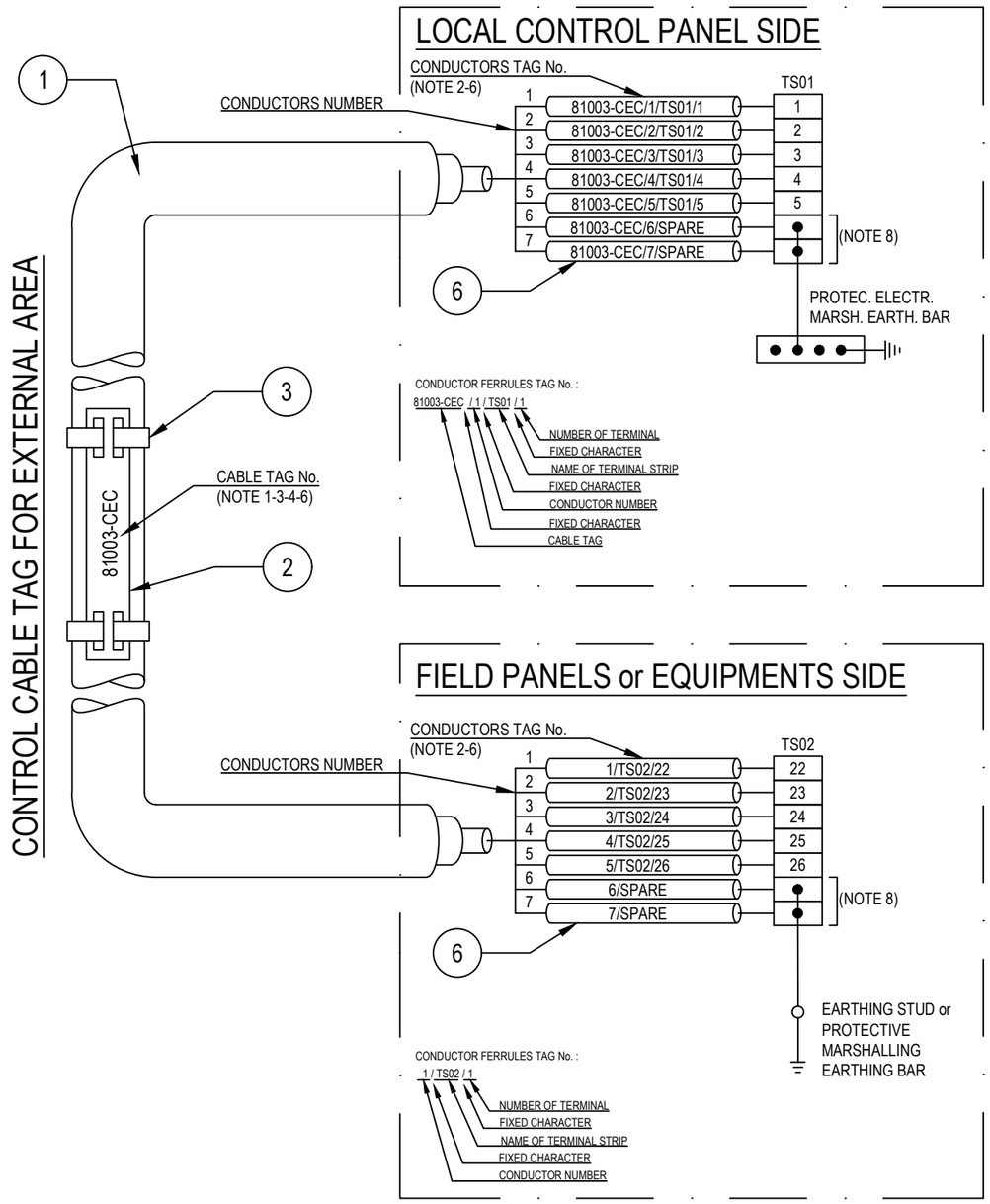
SHEET 090

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20162 Rev. 01

C04



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 50 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.

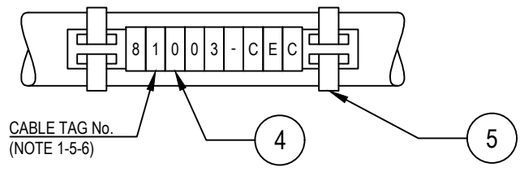
5) THE CABLE TAG FOR INTERNAL AREA SHAL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) THE EARTHING CONNECTION OF THE ARMOUR CABLE IS NOT APPLICABILE IF THE ARMOUR IS CONNECTED TO EARTH WITH METALLIC CABLE GLAND.
   WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
   - PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH RING
   - EARTHING BOSS AND EARTH RING
   - EARTH BAR AND EARTH BAR (IF ANY).

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.

CONTROL CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20092
REV.: 2_A | DATE: 28/08/24 | SIGNATURE: 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 CONTROL 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 008 | REV. 02

F.to UNI A3: 420mmx297mm

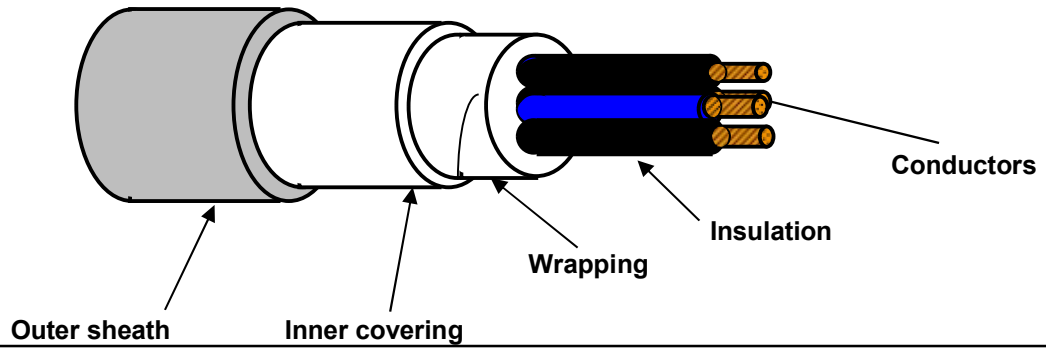
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84331-CEC	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						CB-200F3B	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	BC-200F3B	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	ELECV34-7X1,5	Cable Cu Cl.2/XLPE/LSZH 0,6/1kV 7Cx1,5mm² - Grey	T1_M25_Single			T1_M25_Single				L-300-101-LVT-056 / L-300-101-LVT-049 / L-600-101-LVT-036 / L-450-101-LVT-040

FLEI s.r.l.

Cu Cl.2/XLPE/LSZH 0,6/1 KV

7CX1,5 - CONTROL CABLE - Flame Retardant



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	**XLPE** compound, quality to IEC 60092.360, Nominal Thickness 0,7 mm	
Cores colour code :	**Black NUMBERED (from 1 to 7)**	
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:	by plastic tape helically wound	
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 - 7CX1,5 SQMM - XLPE/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 -**	
	Year of Manufacture - CE + Meter Marking	
Outer diameter :	(13,5 ± 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 :	≥ 1000 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.

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Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 84-10 & process: MC & discipline : I

Instrumental	84-10 AC 35 kVA UPS System (UP-200F3)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
C-CB-200F3A/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	ONSHORE	C10000197	CJX10	100	2024-11-25	RFC 2
C-CB-200F3B/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	ONSHORE	C10000198	CJX10	100	2024-11-25	RFC 2
UP-200F3/B400-SIS-001	TRIP SIGNAL / MARSHALLING PCS	ONSHORE	C10000196	CJX10	100	2024-11-30	RFC 2

ITEM	Tag	UP-200F3/B400-SIS-001	: TRIP SIGNAL / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)	Module	LD_B-300/LD_B-400		
TASK	code	C10000196	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX10

Multi/Single-Core Instrument Control Cable

CABLE DATA

Type: Cu-MICA-XLPE-OS-LSZH-SWB-LSZH | Cores/Size mm²: 12X2,5 mm2 | Color: ORANGE

From: UP-200F3 | To: B400-SIS-001

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.6	Ω
	SCREEN	0.6	Ω
	EARTH	NA	Ω
	ARMr	0.6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

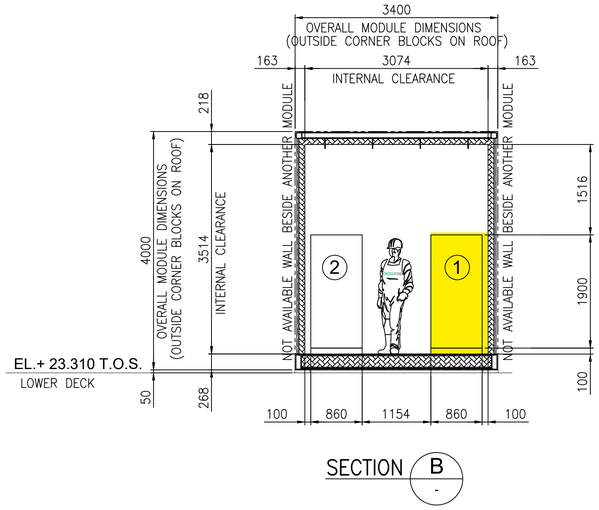
Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

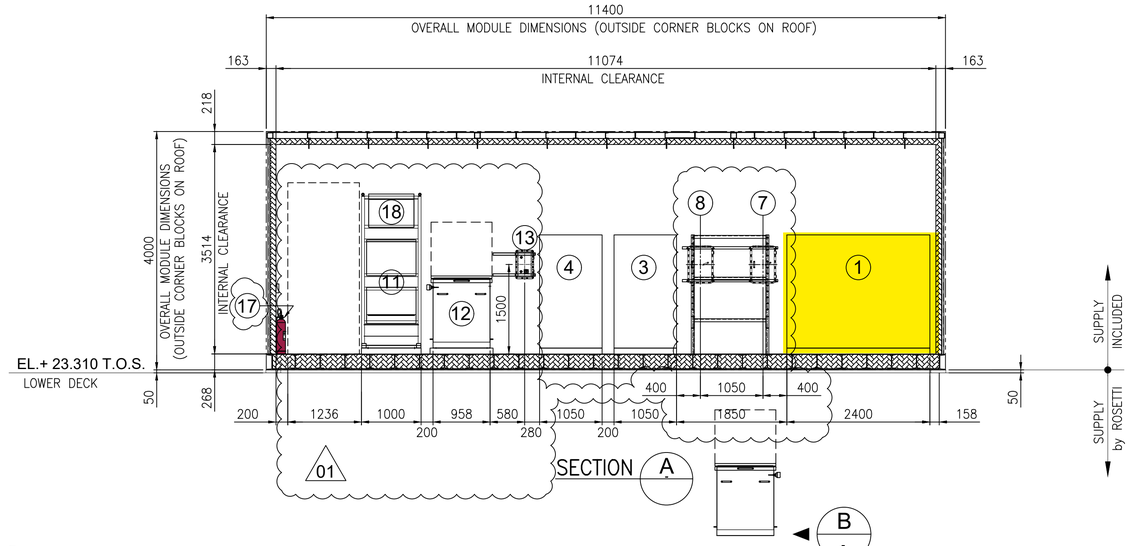
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 | Calibration date: N°7722/24 10/07/2024

Comments: Nota 5: refer to PL C30000680

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-22	2024-11-30	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:13:11.156Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-30T07:46:22.111Z	



SECTION B

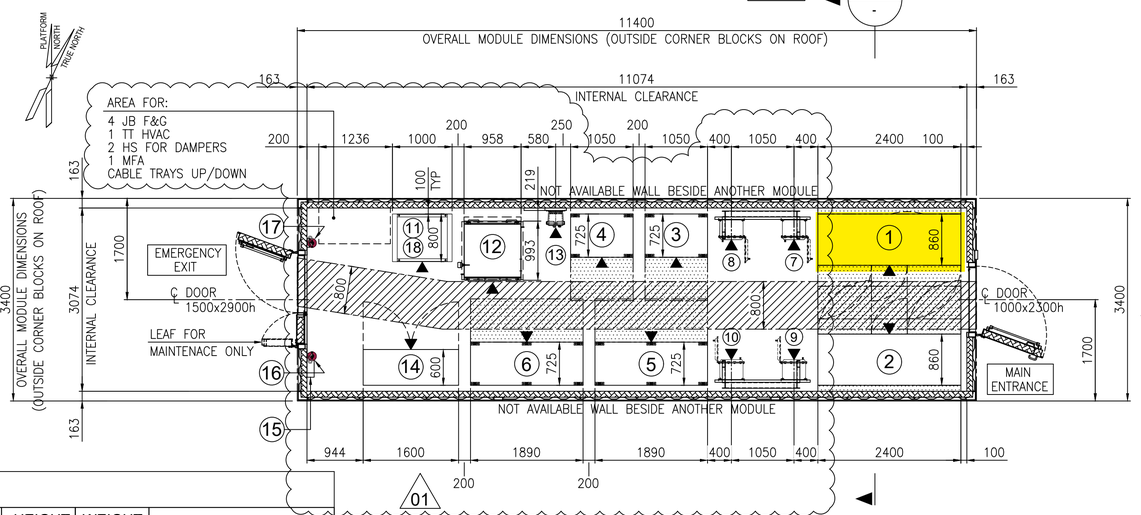


SECTION A

SUPPLY INCLUDED

SUPPLY by ROSETTI

B



A

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

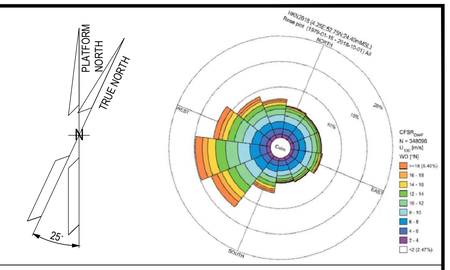
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

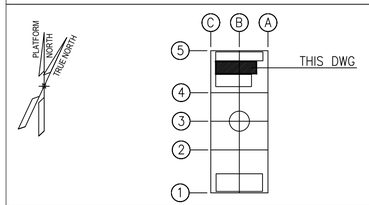
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T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

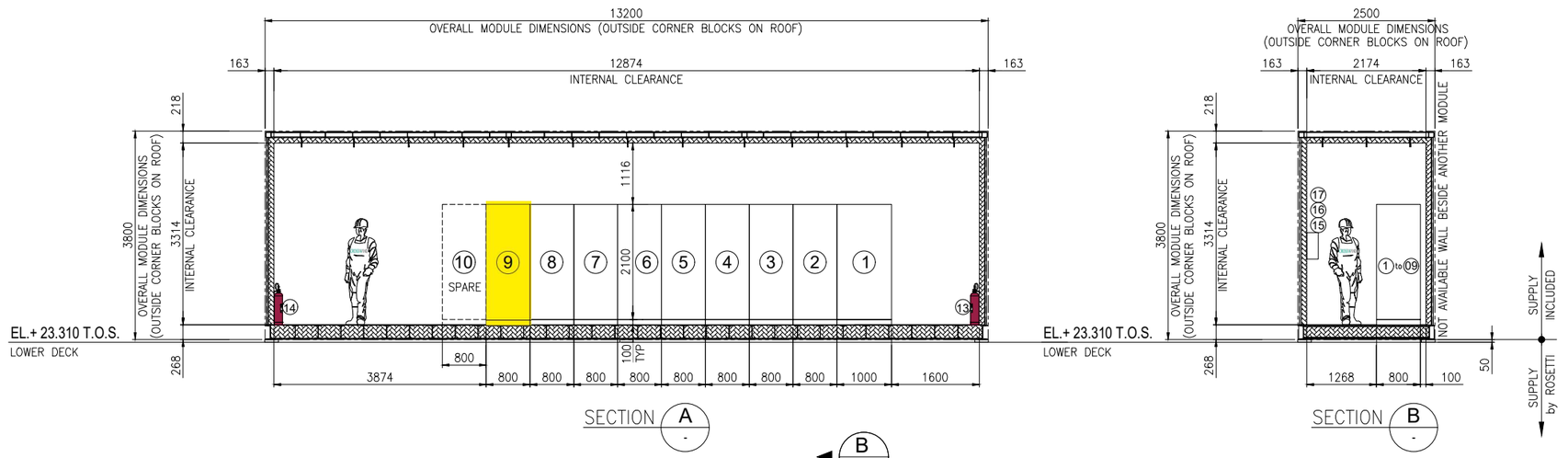
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

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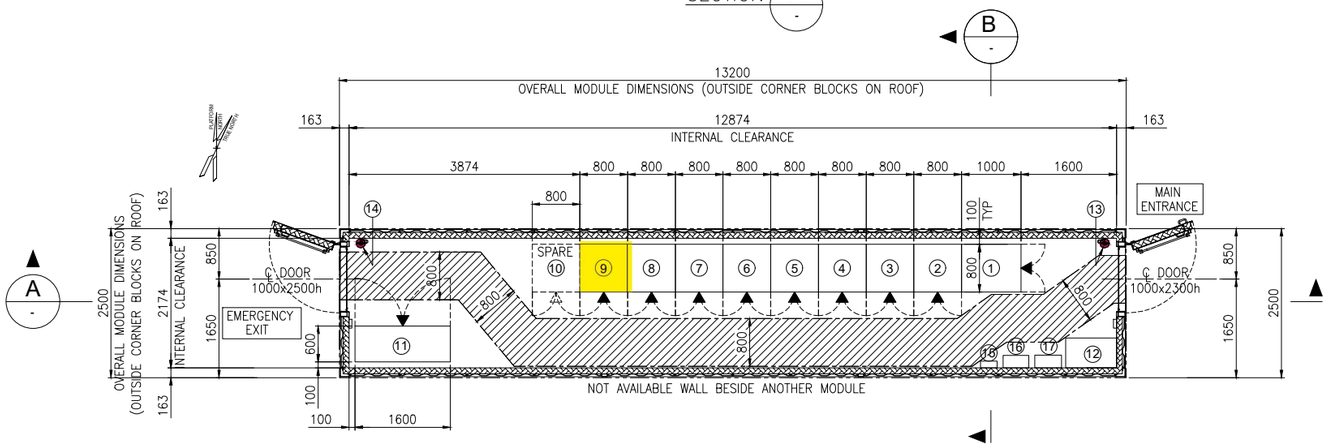
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REV. 03



SECTION A -

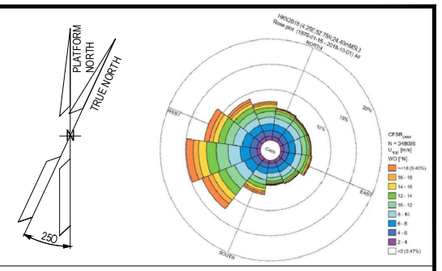
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ EQUIPMENT ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

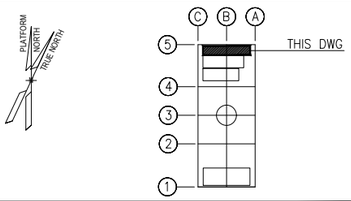
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:33,3
DRAWN MGA	CHECKED LCA	APPROVED DLO	DATE 27/05/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40012	SHEET 001	REV. 03

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
B-300 - UPS ROOM	CABLE NO	MARSHALLING CABINET B400-SIS-001

<01>

ELECT. ISOLATION UPS POWER UCP A-50000 (UP-200F3) — 84-XS-001 — TB-X12 — 17 (1BK) / 18 (2BK)

ELECT. ISOLATION UPS POWER UCP A-64000 (UP-200F3) — 84-XS-002 — TB-X12 — 15 (3BK) / 16 (4BK)

ELECT. ISOLATION UPS POWER UCP A-63000 (UP-200F3) — 84-XS-003 — TB-X12 — 13 (5BK) / 14 (6BK)

ELECT. ISOLATION UPS POWER UCP HVAC B-100 (UP-200F3) — 84-XS-004 — TB-X12 — 19 (7BK) / 20 (8BK)

ELECT. ISOLATION UPS POWER UCP HVAC B-200 (UP-200F3) — 84-XS-005 — TB-X12 — 21 (9BK) / 22 (10BK)

INHIBIT. BATTERY CHARGING AC UPS (UP-200F3) — 84-XS-010 — TB-120 — 1 (11BK) / 2 (12BK)

NOTE-2

UP-200F3/B400-SIS-001
12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

Shield Bar

TB-UP-200F3

1BK / 2BK	01 / 02	84-XS-001
3BK / 4BK	03 / 04	84-XS-002
5BK / 6BK	05 / 06	84-XS-003
7BK / 8BK	07 / 08	84-XS-004
9BK / 10BK	09 / 10	84-XS-005
11BK / 12BK	11 / 12	84-XS-010

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
ELECTRICAL EQUIPMENT – SHUTDOWN

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	024	01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

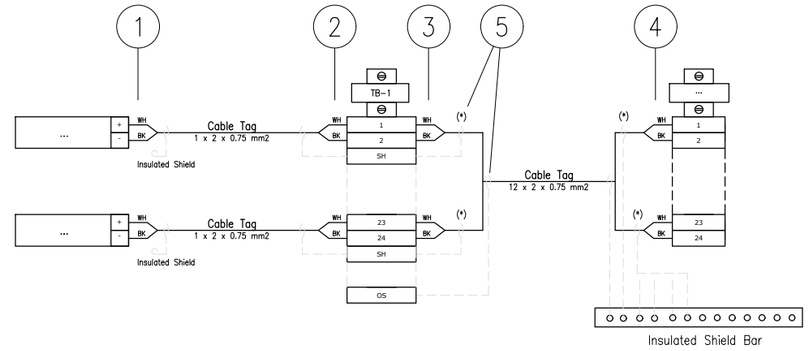
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

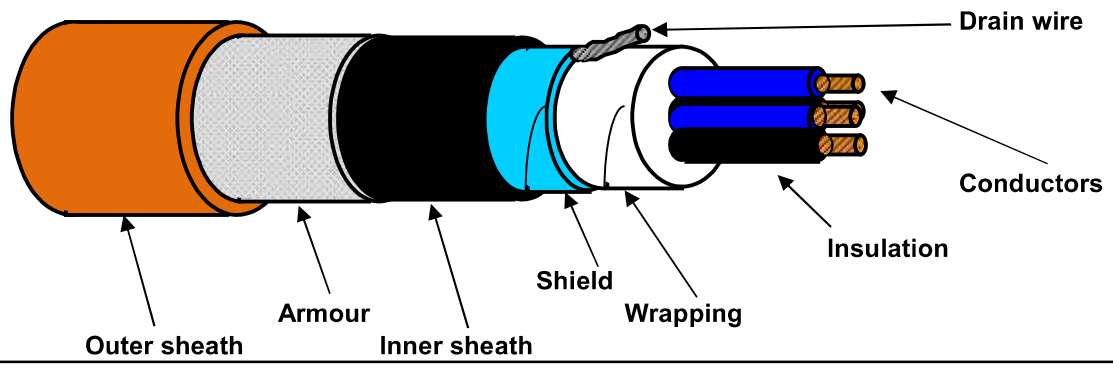
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
UP-200F3/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	B400-SIS-001	Marshalling SIS	Lower Deck (B-400)	SMICV13-12X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 12x2,5mm² - Orange	T2_M25_Double			n.a.				I-MCT-301 / B-300-SEC-1B / B-300-SEC-1A / L-SEC-4 / L-SEC-1B / L-SEC-1A / B-400-SEC-1A / I-MCT-401

Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250 V (300 V)

12X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Black NUMBERED (from 1 to 12)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	3/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,5 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant, Average Thickness 1,6 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 12X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(19,8 ± 10%) mm	
Over armour diameter :	(21,0 ± 10%) mm	
Outer diameter :	(24,2 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
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 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 sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	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.

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-CB-200F3A/B400-SIS-001 : TRIP SIGNAL / MARSHALLING PCS				Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	84-10 : AC 35 kVA UPS System (UP-200F3)				Module	LD_B-300/LD_B-400
TASK	code	C10000197		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX10 — Multi/Single-Core Instrument Control Cable

CABLE DATA

Type: Cu-MICA-XLPE-OS-LSZH-SWB-LSZH — Cores/Size mm²: 2X2,5 mm2 — Color: ORANGE

From: CB-200F3A — To: B400-SIS-001

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0.6	Ω
	SCREEN	0.6	Ω
	EARTH	NA	Ω
	ARMr	0.6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

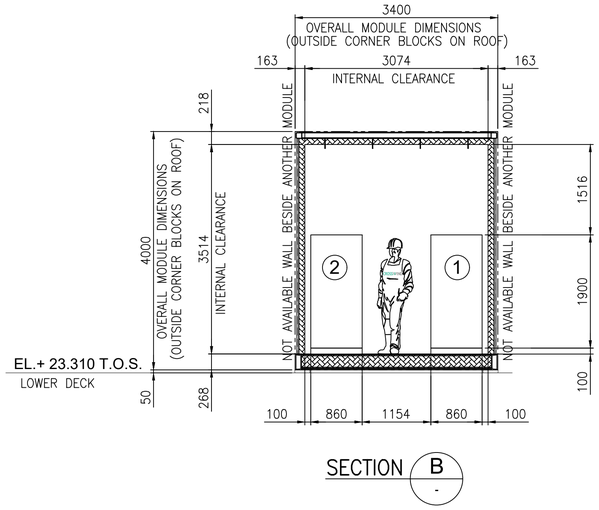
TESTING INSTRUMENTS USED

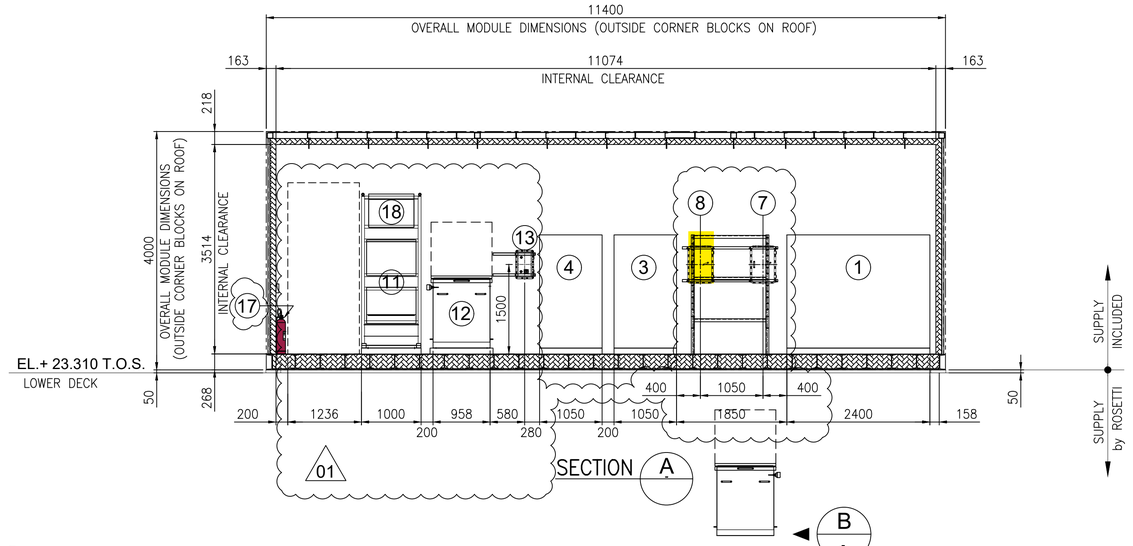
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 — Calibration date: N°7722/24 10/07/2024

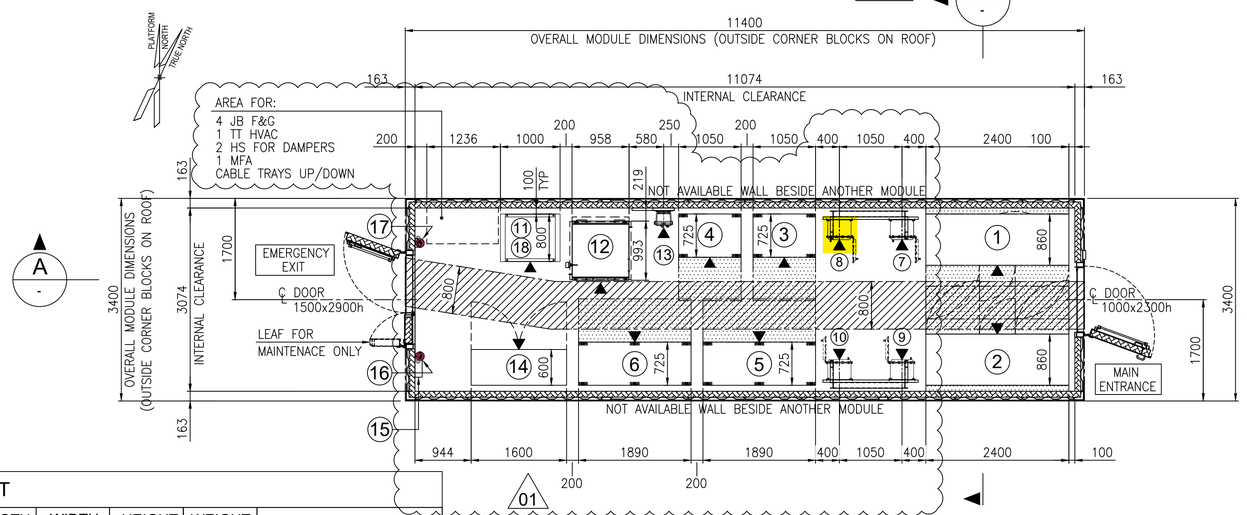
Comments: Nota 5: refer to PL C30000680

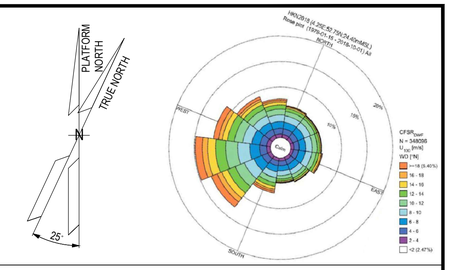
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-22	2024-11-25	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:13:22.736Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-25T14:35:15.146Z	

DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01









NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

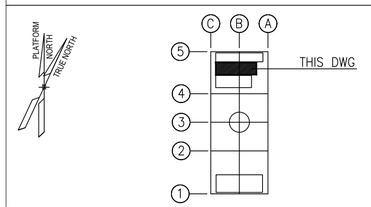
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20106**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

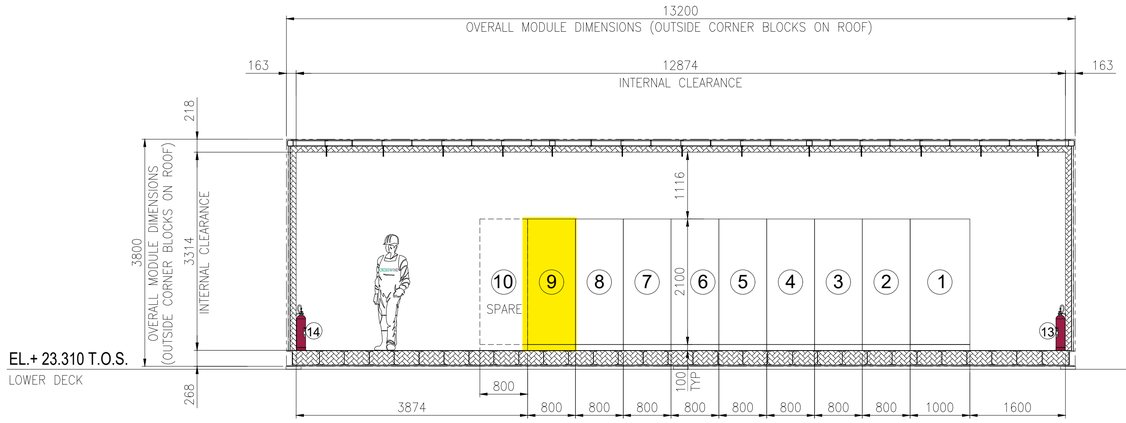
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

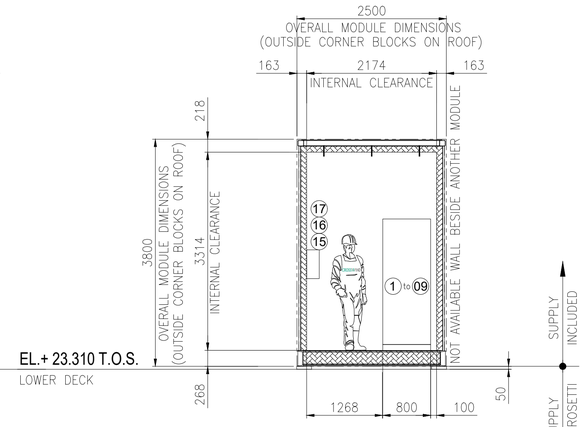
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

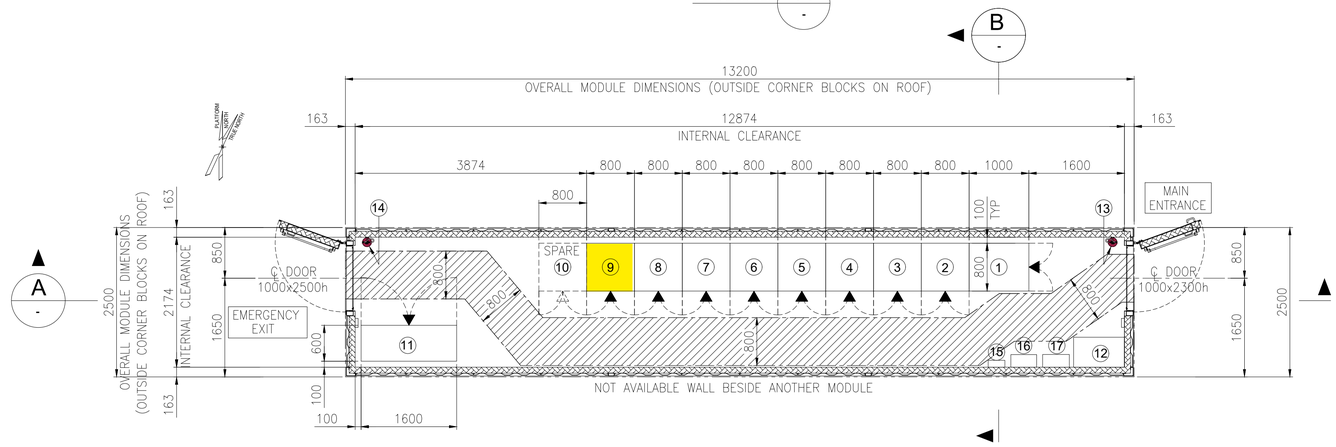
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



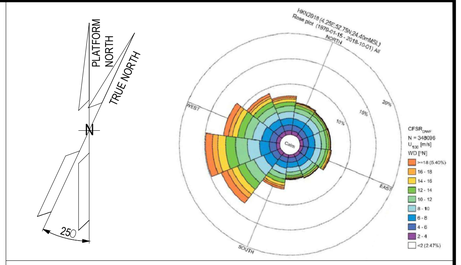
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

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2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ EQUIPMENT ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

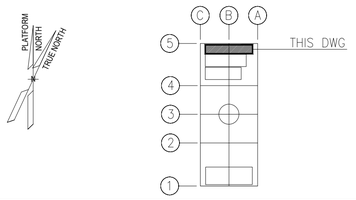
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:33,3
DRAWN MGA	CHECKED LCA	APPROVED DLO	DATE 27/05/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40012	SHEET 001	REV. 03

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
B-300 - UPS ROOM	CABLE NO	MARSHALLING CABINET B400-SIS-001

<01>

DISCONNECT AC UPS UP-200F3 BATTERIES A (CB-200F3A)	84-XS-007A ~~81-XS-007A~~	TB-X3 7 1BK / 8 2BK NOTE-2	C-CB-200F3A/B400-SIS-001 ~~CB-200F3A/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 03 / 2BK 04	81-XS-007A
DISCONNECT AC UPS UP-200F3 BATTERIES B (CB-200F3B)	84-XS-007B ~~81-XS-007B~~	TB-X3 7 1BK / 8 2BK NOTE-2	C-CB-200F3B/B400-SIS-001 ~~CB-200F3B/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 11 / 2BK 12	81-XS-007B
DISCONNECT AC UPS UP-200F4 BATTERIES A (CB-200F4A)	84-XS-008A ~~81-XS-008A~~	TB-X3 7 1BK / 8 2BK NOTE-2	C-CB-200F4A/B400-SIS-001 ~~CB-200F4A/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 05 / 2BK 06	81-XS-008A
DISCONNECT AC UPS UP-200F4 BATTERIES B (CB-200F4B)	84-XS-008A ~~81-XS-008B~~	TB-X3 7 1BK / 8 2BK NOTE-2	C-CB-200F4B/B400-SIS-001 ~~CB-200F4B/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 13 / 2BK 14	81-XS-008B
INHIBIT. BATTERY CHARGING AC UPS (UP-200F4)	84-XS-011	TB-120 1 1BK / 2 2BK NOTE-2	C-UP-200F4/B400-SIS-001 ~~UP-200F4/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 43 / 2BK 44	84-XS-011

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
ELECTRICAL EQUIPMENT – SHUTDOWN

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 025	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

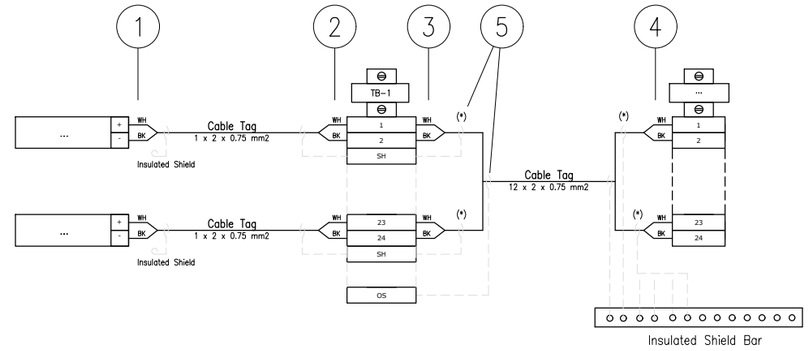
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

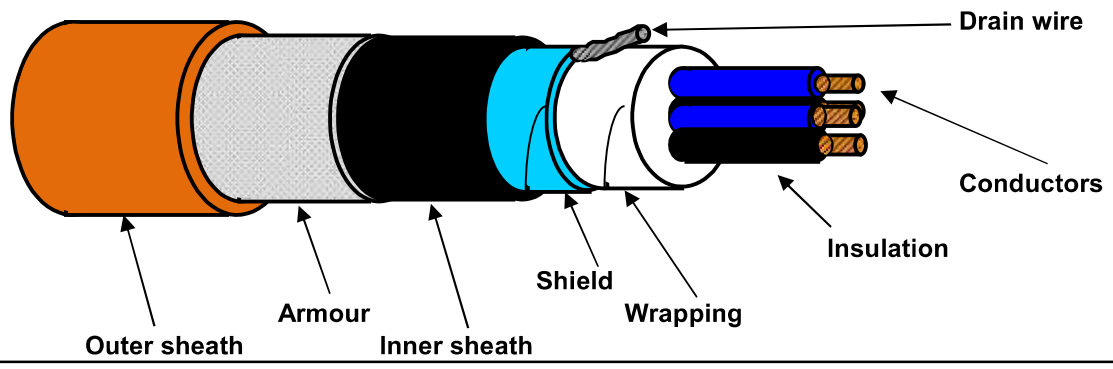
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-CB-200F3A/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	B400-SIS-001	Marshalling SIS	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			n.a.				I-MCT-301 / B-300-SEC-1B / B-300-SEC-1A / L-SEC-4 / L-SEC-1B / L-SEC-1A / B-400-SEC-1A / I-MCT-401

Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250 V (300 V)

2X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant,	
	Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
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 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 sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	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	C-CB-200F3B/B400-SIS-001 : TRIP SIGNAL / MARSHALLING PCS				Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	84-10 : AC 35 kVA UPS System (UP-200F3)				Module	LD_B-300/LD_B-400
TASK	code	C10000198		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX10 Multi/Single-Core Instrument Control Cable

CABLE DATA

Type: Cu-MICA-XLPE-OS-LSZH-SWB-LSZH | Cores/Size mm²: 2X2,5 mm2 | Color: ORANGE

From: CB-200F3B | To: B400-SIS-001

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0.6	Ω
	SCREEN		0.6	Ω
	EARTH		NA	Ω
	ARMr		0.6	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

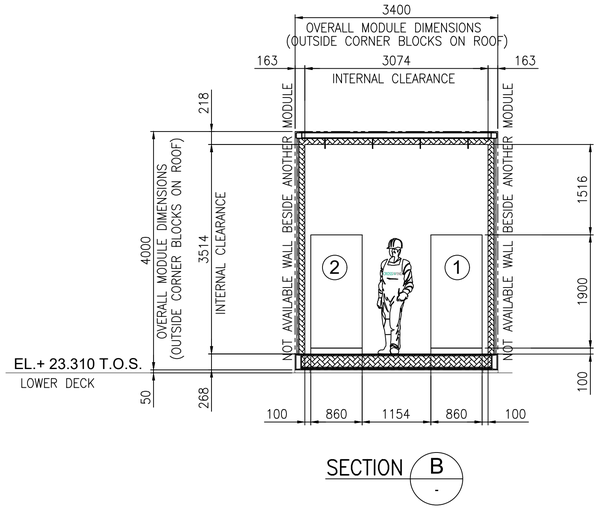
TESTING INSTRUMENTS USED

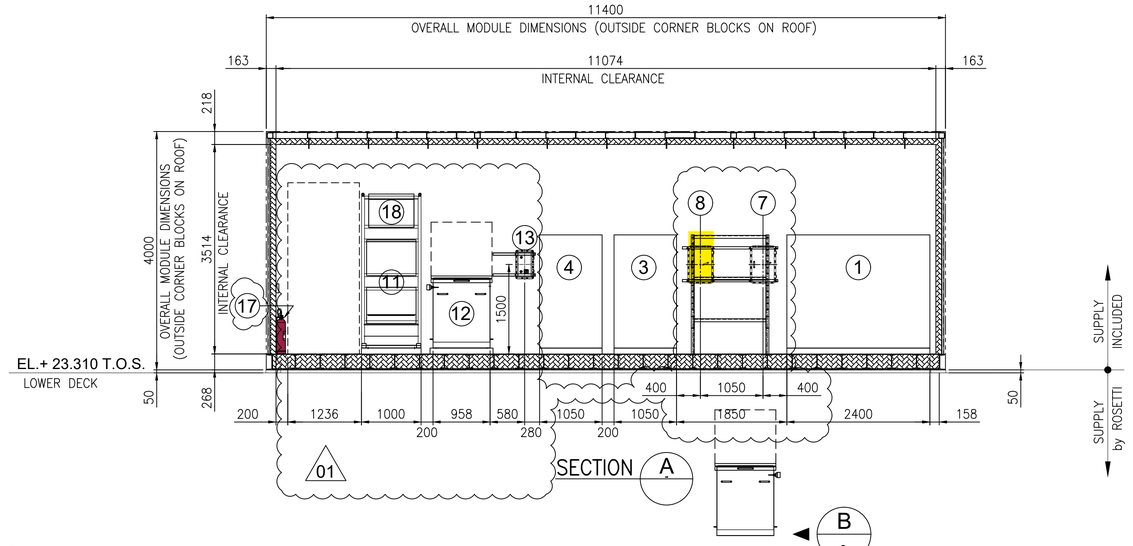
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 | Calibration date: N°7722/24 10/07/2024

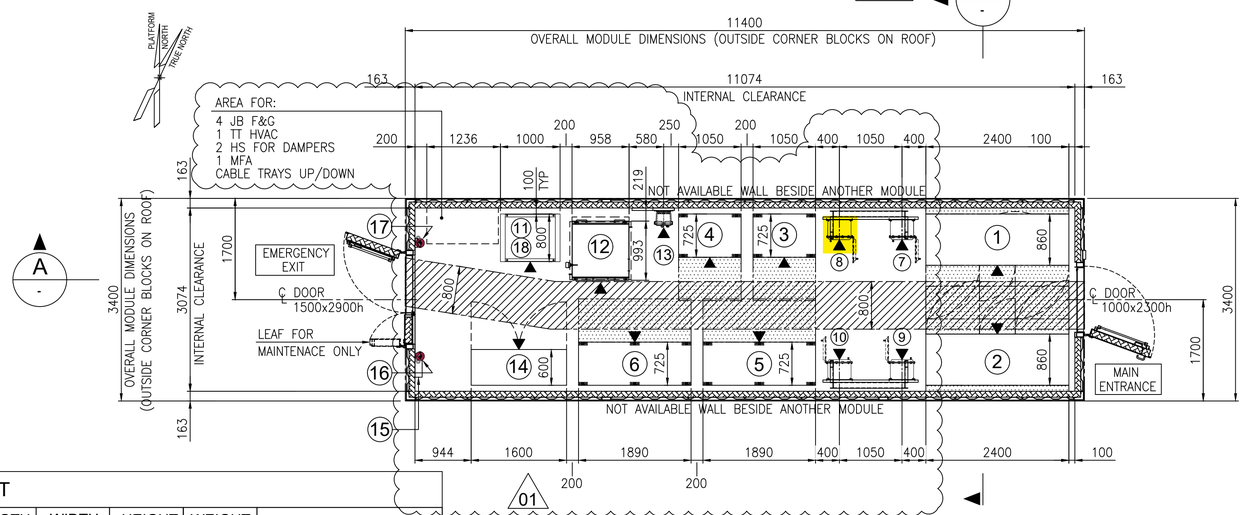
Comments: Nota 5: refer to PL C30000680

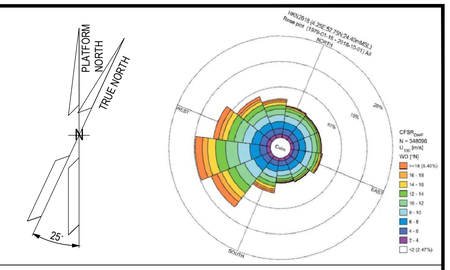
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-11-22	2024-11-25	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:13:35.274Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-11-25T14:37:03.847Z	

DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01









NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

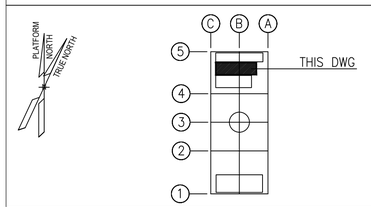
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20106**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

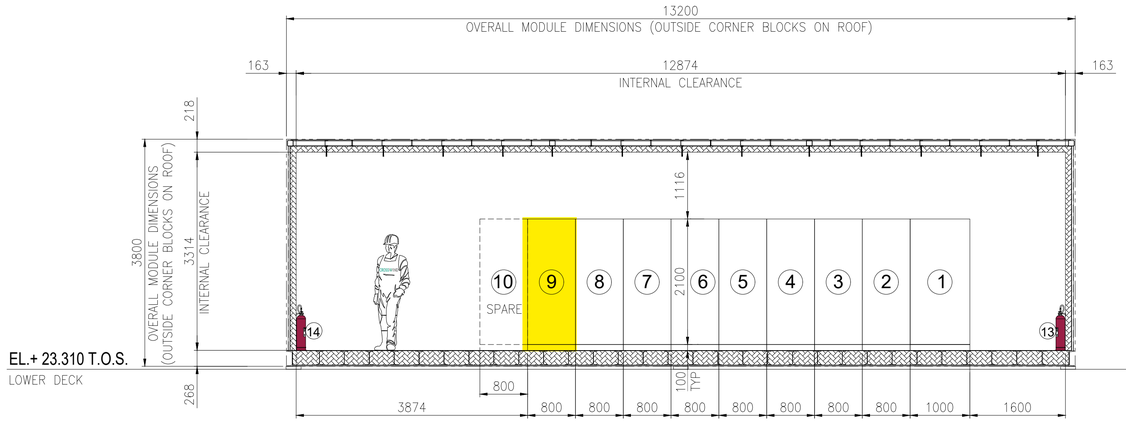
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

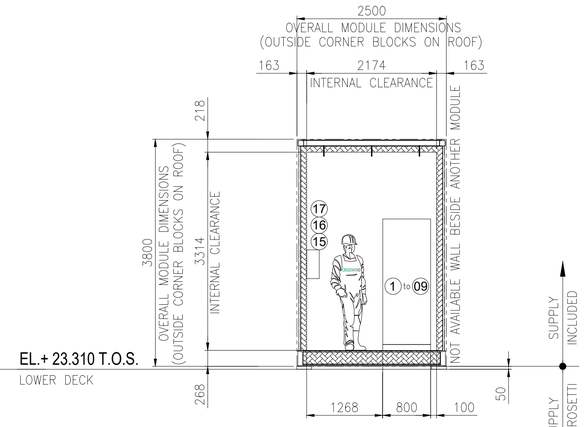
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg

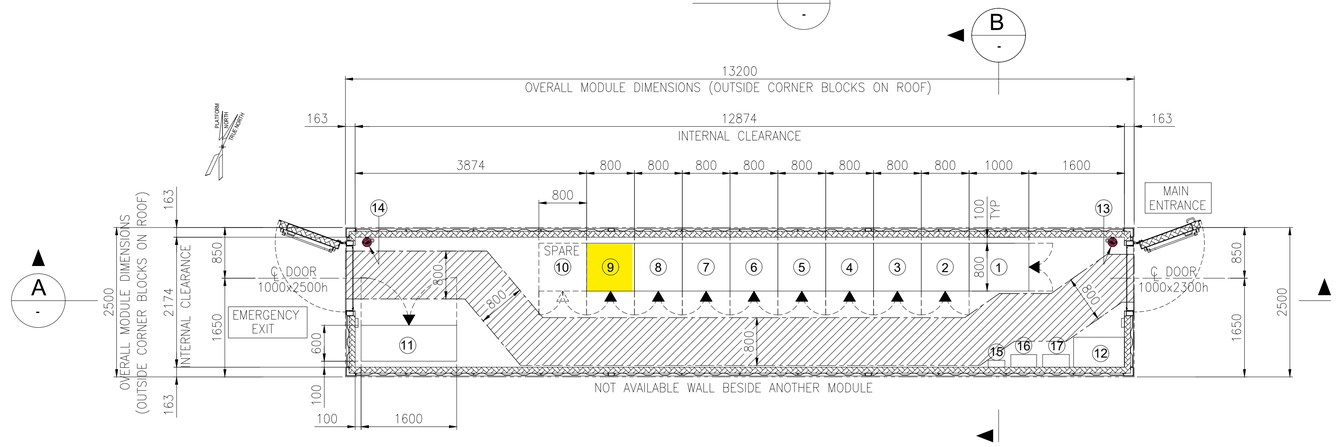
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



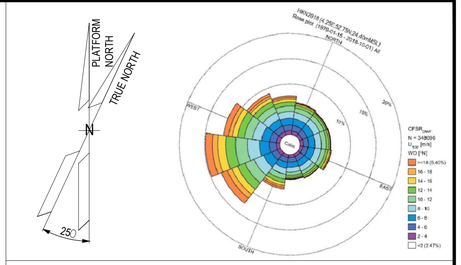
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ EQUIPMENT ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

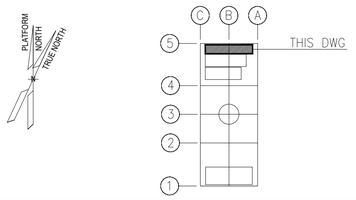
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:33,3
DRAWN MGA	CHECKED LCA	APPROVED DLO	DATE 27/05/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40012	SHEET 001	REV. 03

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
B-300 - UPS ROOM	CABLE NO	MARSHALLING CABINET B400-SIS-001

<01>

DISCONNECT AC UPS UP-200F3 BATTERIES A (CB-200F3A)	84-XS-007A ~~81-XS-007A~~	TB-X3 7 (1BK) 8 (2BK) NOTE-2	C-CB-200F3A/B400-SIS-001 ~~CB-200F3A/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 03, 2BK 04	81-XS-007A
DISCONNECT AC UPS UP-200F3 BATTERIES B (CB-200F3B)	84-XS-007B ~~81-XS-007B~~	TB-X3 7 (1BK) 8 (2BK) NOTE-2	C-CB-200F3B/B400-SIS-001 ~~CB-200F3B/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 11, 2BK 12	81-XS-007B
DISCONNECT AC UPS UP-200F4 BATTERIES A (CB-200F4A)	84-XS-008A ~~81-XS-008A~~	TB-X3 7 (1BK) 8 (2BK) NOTE-2	C-CB-200F4A/B400-SIS-001 ~~CB-200F4A/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 05, 2BK 06	81-XS-008A
DISCONNECT AC UPS UP-200F4 BATTERIES B (CB-200F4B)	84-XS-008A ~~81-XS-008B~~	TB-X3 7 (1BK) 8 (2BK) NOTE-2	C-CB-200F4B/B400-SIS-001 ~~CB-200F4B/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 13, 2BK 14	81-XS-008B
INHIBIT. BATTERY CHARGING AC UPS (UP-200F4)	84-XS-011	TB-120 1 (1BK) 2 (2BK) NOTE-2	C-UP-200F4/B400-SIS-001 ~~UP-200F4/B400-SIS-001~~ 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	Shield Bar	TB-XS-000 1BK 43, 2BK 44	84-XS-011

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
ELECTRICAL EQUIPMENT – SHUTDOWN

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 025	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

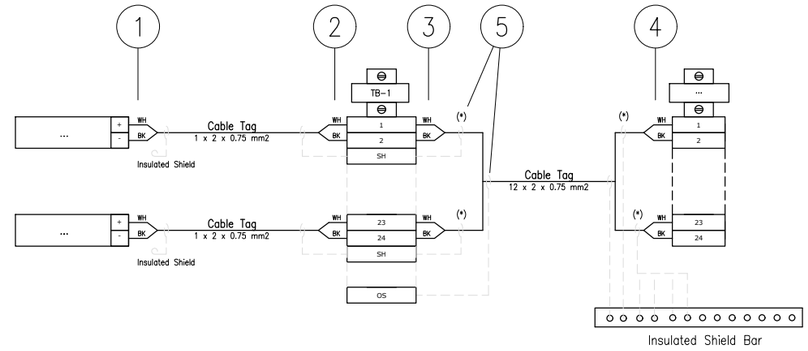
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

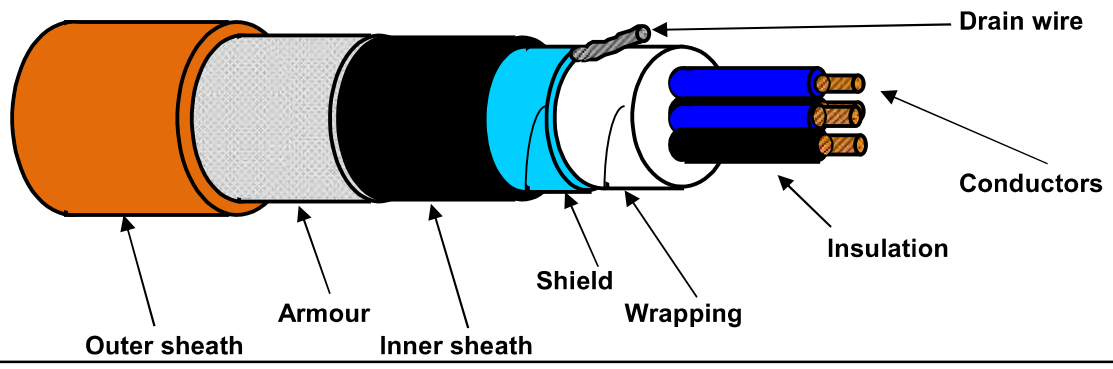
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-CB-200F3A/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						CB-200F3A	Isolator Battery Box for AC UPS 35 kVA	Lower Deck (B-300)	B400-SIS-001	Marshalling SIS	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	T2_M20_Double			n.a.				I-MCT-301 / B-300-SEC-1B / B-300-SEC-1A / L-SEC-4 / L-SEC-1B / L-SEC-1A / B-400-SEC-1A / I-MCT-401

Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250 V (300 V)

2X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant,	
	Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
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 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 sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	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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Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

NOT APPLICABLE

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 84-10 & process: MC & discipline : T

Telecom	84-10 AC 35 kVA UPS System (UP-200F3)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
UP-200F3/B400-NET-001.01	COMMUNICATION / EMCS SYSTEM	ONSHORE	C10004370	CIX09	100	2024-11-22	RFC 2
UP-200F3/B400-NET-001.02	COMMUNICATION / EMCS SYSTEM	ONSHORE	C10004371	CIX09	100	2024-11-22	RFC 2

ROSETTI MARINO

CROSSWIND

ITEM	Tag	UP-200F3/B400-NET-001.01	:	COMMUNICATION / EMCS SYSTEM	Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	84-10	:	AC 35 kVA UPS System (UP-200F3)	Module	LD_B-300/LD_B-400	
TASK	code	C10004370	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity	CCK	Discipline	Telecom	Form	CIX09	Telecom Cable RJ45

CABLE DATA

Type	FTP-LSZH-IS-OS-SWB-LSZH	Cores/Size mm²	4X2X23AWG mm2	Color	GREY
From	UP-200F3	To	B400-NET-001		

1	Confirm cable is as specified in project cable schedule	OK
2	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	Confirm cable labelling is in accordance with specifications.	PL
8	Check cable is correctly loomed and segregated in accordance with specification.	OK
9	Check proper fitting of heat shrink sleeves and cable glands (if applicable).	OK
10	Check cores marking are in accordance with termination diagram.	OK
11	Check terminations are in accordance with latest termination diagram.	OK
12	To roll up that measured lenght complies with pulled lenght.	OK
13	To roll up the cable complies with Cat. 5E performance requirements (250 Mhz).	OK
14	Attach LAN tester print out to this test sheet.	OK
15	if required produce Red Line Mark Up for "AS BUILT"	

Comments: Nota 4: refer to PL C3000680

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-21	2024-11-22	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-21T14:41:23.633Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-22T16:24:20.264Z	

ROSETTI MARINO

Cable ID: UP-200F3/B400-NET-001.01

Test Summary: PASS

Test Limit: ISO11801 PL2 Class Ea
Limits Version: V7.6
Date / Time: 21-11-2024 12:38:43
Headroom 4.9 dB (NEXT 1,2-4,5)
Cable Type: Cat 6A S/FTP
NVP: 77.0%

Main: Versiv
S/N: 2226344
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000 (DSX-PLA804)
S/N: 22340270

Remote: Versiv
S/N: 2226336
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000R (DSX-PLA804)
S/N: 22340257

Length (m), Limit 90.0	[Pair 3,6]	39.9
Prop. Delay (ns), Limit 496	[Pair 1,2]	176
Delay Skew (ns), Limit 43	[Pair 1,2]	3
Resistance (ohms), Limit 20.60	[Pair 3,6]	5.63
Insertion Loss Margin (dB)	[Pair 3,6]	22.4
Frequency (MHz)	[Pair 3,6]	500.0
Limit (dB)	[Pair 3,6]	41.6

	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	3,6-4,5	1,2-4,5	3,6-4,5
NEXT (dB)	4.9	5.9	4.9	5.9
Freq. (MHz)	499.0	499.0	499.0	499.0
Limit (dB)	29.3	29.3	29.3	29.3
Worst Pair	4,5	4,5	4,5	4,5
PS NEXT (dB)	5.0	5.2	5.0	5.2
Freq. (MHz)	500.0	499.0	500.0	499.0
Limit (dB)	26.4	26.4	26.4	26.4

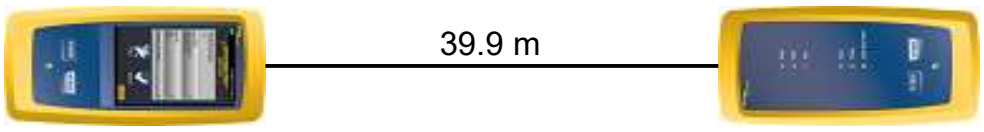
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-7,8	7,8-4,5	4,5-7,8	7,8-4,5
ACR-F (dB)	13.3	13.3	13.8	13.5
Freq. (MHz)	3.3	3.3	499.0	499.0
Limit (dB)	55.0	55.0	11.3	11.3
Worst Pair	4,5	4,5	4,5	4,5
PS ACR-F (dB)	15.4	13.9	15.4	13.9
Freq. (MHz)	474.0	499.0	474.0	499.0
Limit (dB)	8.7	8.3	8.7	8.3

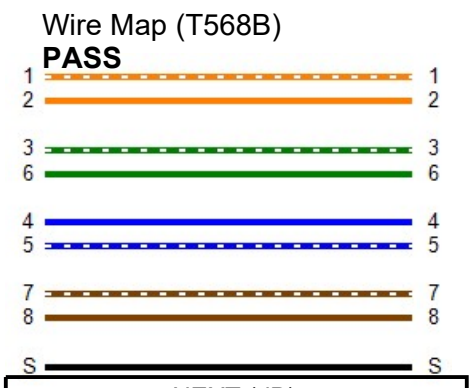
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	1,2-4,5	1,2-4,5	3,6-4,5
ACR-N (dB)	15.7	13.9	27.6	28.6
Freq. (MHz)	29.0	31.8	499.0	499.0
Limit (dB)	41.2	40.1	-12.3	-12.3
Worst Pair	4,5	4,5	4,5	3,6
PS ACR-N (dB)	15.1	14.1	27.8	27.9
Freq. (MHz)	29.0	32.0	500.0	499.0
Limit (dB)	38.8	37.6	-15.3	-15.2

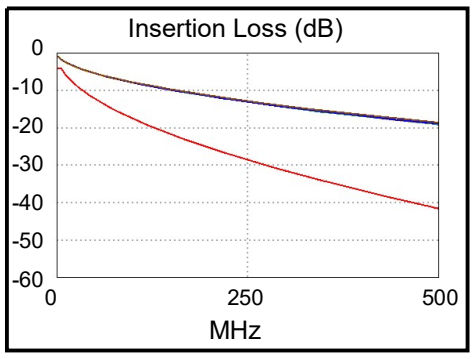
PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	4,5	4,5
RL (dB)	2.2	2.0	2.6	9.7
Freq. (MHz)	16.1	16.1	435.0	350.0
Limit (dB)	20.0	20.0	8.0	8.6

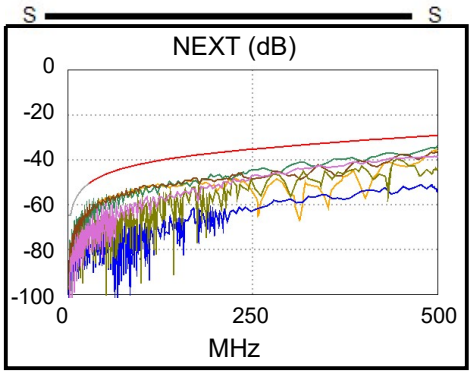
Compliant Network Standards:

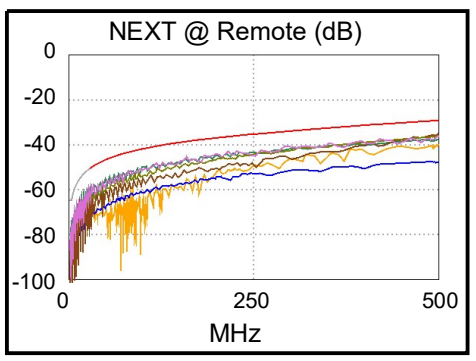
10BASE-T	100BASE-TX	100BASE-T4
1000BASE-T	2.5GBASE-T	5GBASE-T
10GBASE-T	ATM-25	ATM-51
ATM-155	100VG-AnyLan	TR-4
TR-16 Active	TR-16 Passive	

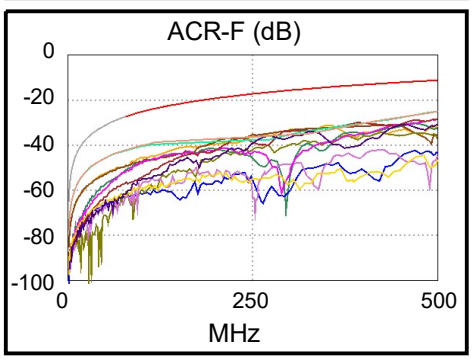


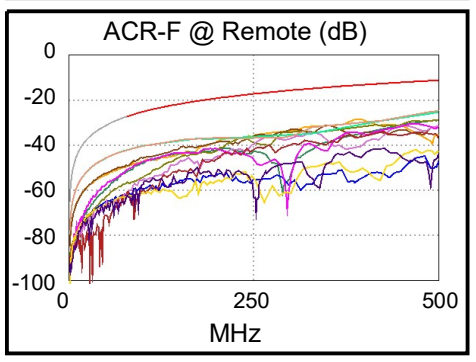


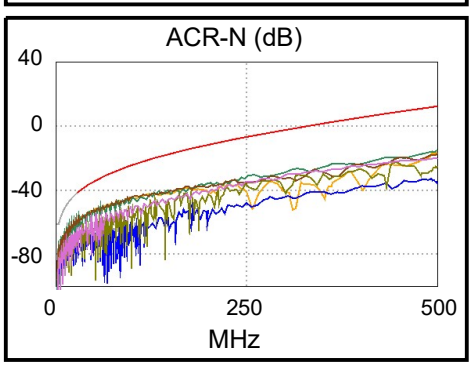


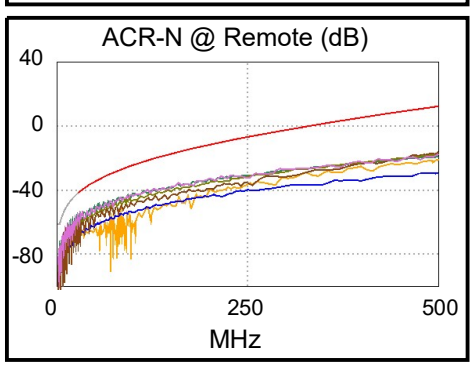


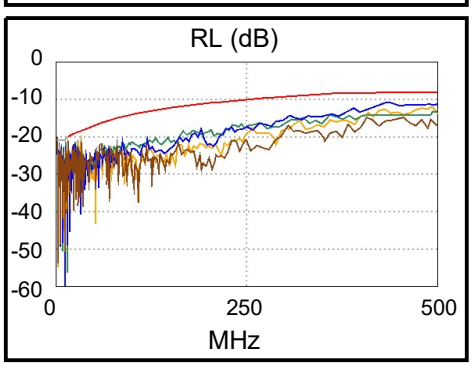


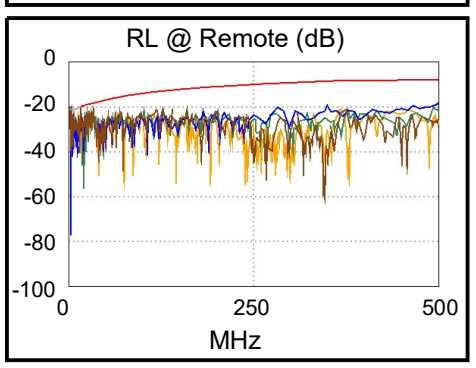




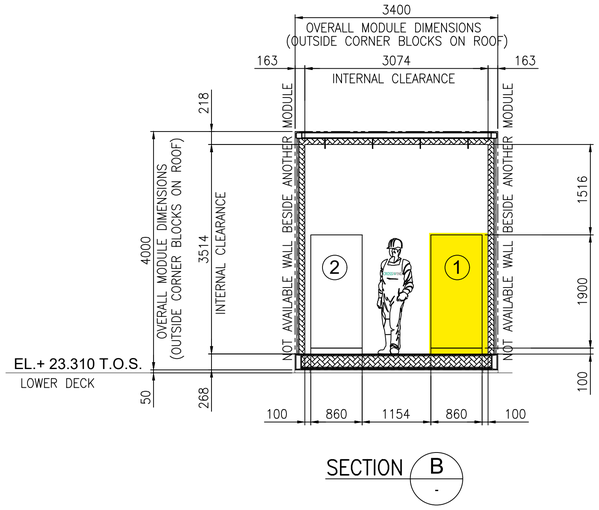




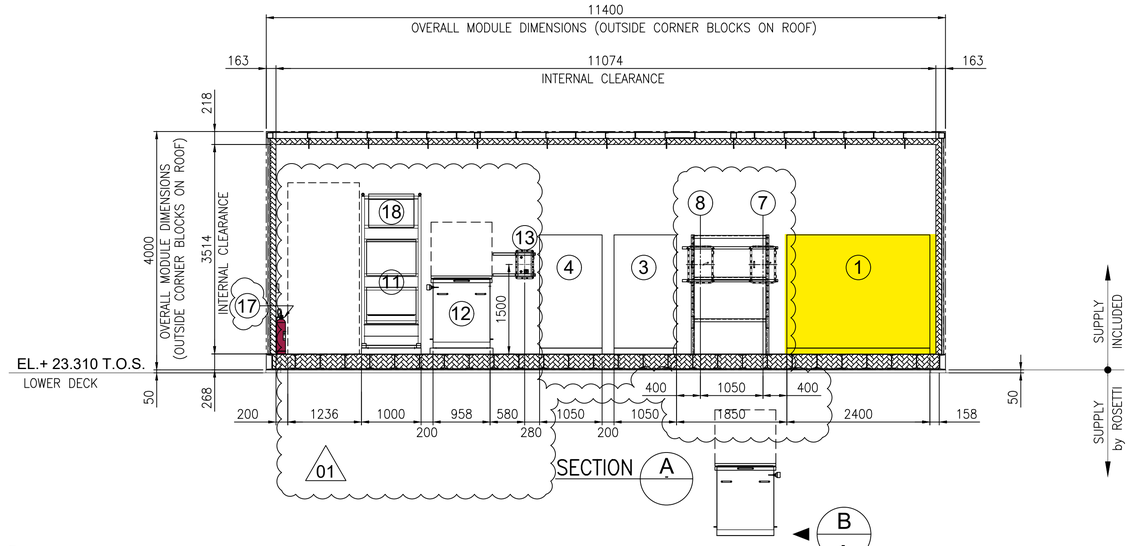




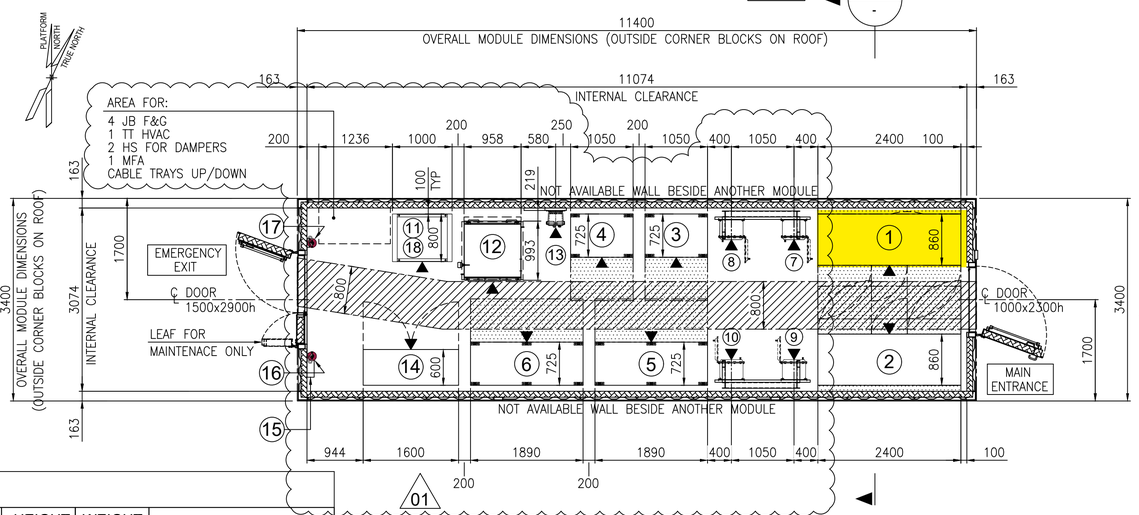
LinkWare™ PC Version 11.4



SECTION B -



SECTION A -



A -

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

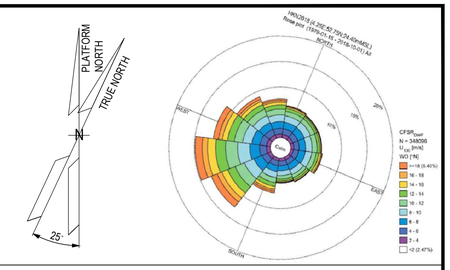
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

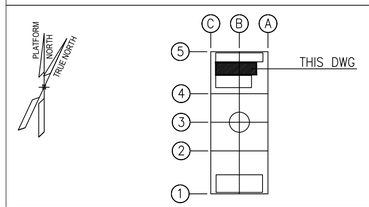
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

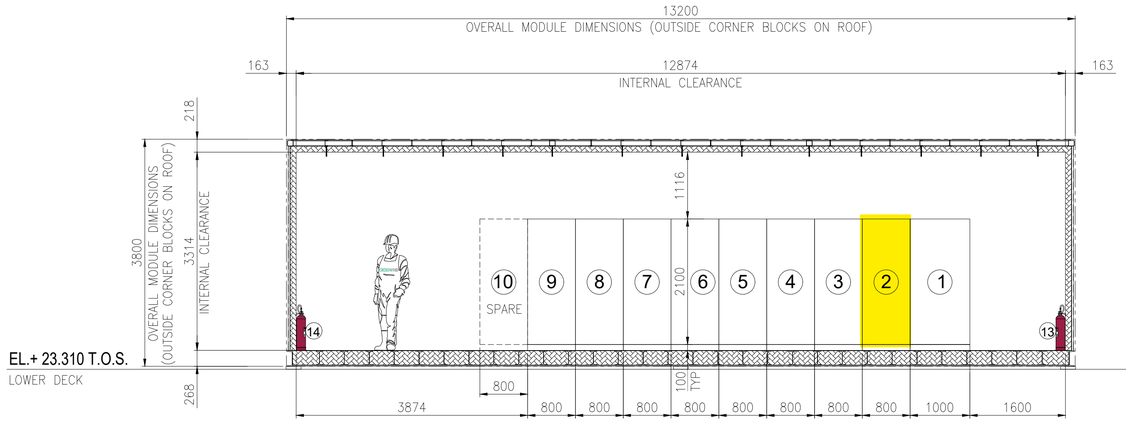
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

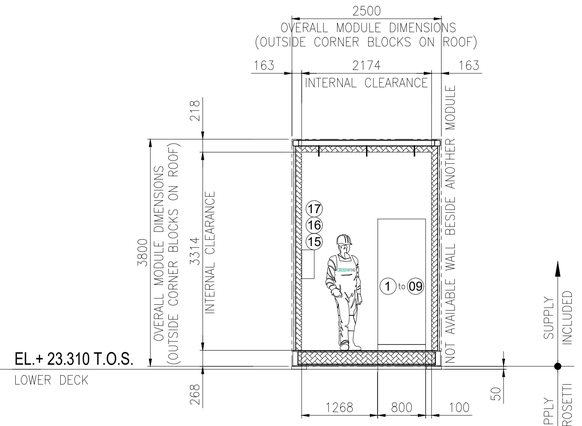
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DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

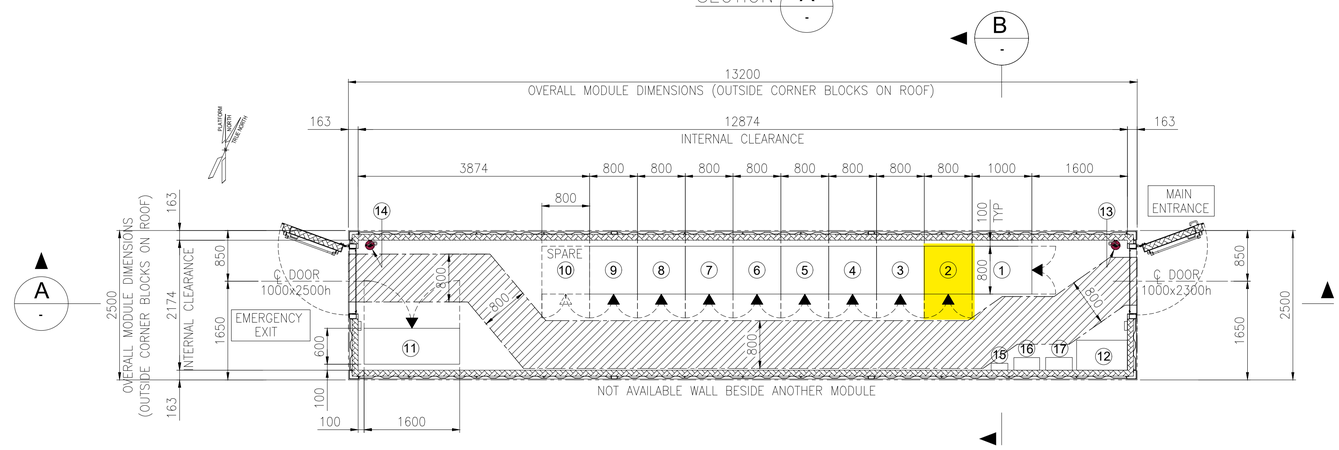
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



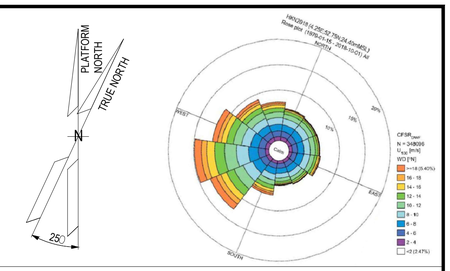
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ EQUIPMENT ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

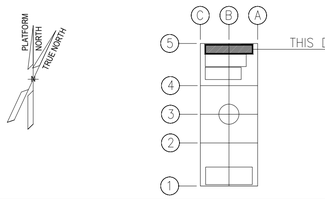
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND — ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH) OFF-SHORE ITER EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:33,3
DRAWN MGA | CHECKED LCA | APPROVED DLO | DATE 27/05/24
A1 | DRAWING NO. 123A90-DDL-IN-DL-40012 | SHEET 001 | REV. 03

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123A90-DDL-IN-DG-40015 REV. 01

AC UPS (B-300)

I&T EQUIPMENT ROOM (ITER B400)

NETWORK CABINET - B400-NET-001

HVAC CABINET B300-HSB-001 Ref. Vendor Doc.: 1724000049-HV-DA-00028	ITEM: SCALANCE XC208 PORT: P3 LAN	RJ45	B300-HSB-001/B400-NET-001 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P13
AC UP 35kVA UP -200F3 Ref. Vendor Doc.: 1724000372-EL-DG-00009	ITEM: MULTICANCOM2 UPS1 -A9 / -A29.1 PORT: -X5	RJ45	UP-200F3/B400-NET-001.01 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P05
AC UP 35kVA UP -200F3 Ref. Vendor Doc.: 1724000372-EL-DG-00009	ITEM: MULTICANCOM2 UPS2 -A9 / -A29.1 PORT: -X5	RJ45	UP-200F3/B400-NET-001.02 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: ~~P06~~ P23
AC UP 15kVA UP -200F4 Ref. Vendor Doc.: 1724000372-EL-DG-00009	ITEM: MULTICANCOM2 UPS2 -A9 / -A29.1 PORT: -X5	RJ45	UP-200F4/B400-NET-001.01 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: ~~P07~~ P24
AC UP 15kVA UP -200F4 Ref. Vendor Doc.: 1724000372-EL-DG-00009	ITEM: MULTICANCOM2 UPS2 -A9 / -A29.1 PORT: -X5	RJ45	UP-200F4/B400-NET-001.02 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P08

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
COMMUNICATION – CAT-6

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 035	REV. 01

File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40015

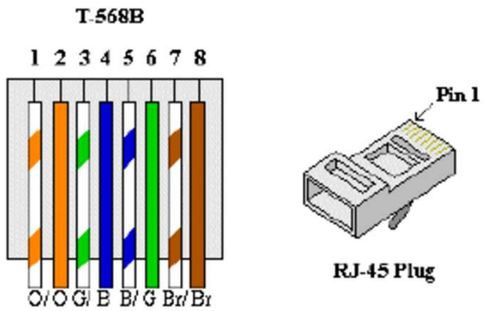
REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. SWITCH TAG NAME AND PORT WILL BE DEFINED DURING THE CONSTRUCTION PHASE
6. FIBER OPTIC TAG NAME WILL BE DEFINED DURING THE CONSTRUCTION PHASE.

<01>

7. CAT. 6A CABLE SHALL BE TERMINATED MEETING REQUIREMENTS OF STANDARD EIA/TIA 568B:



RJ-45 Plug

8. FOR OPTICAL FIBERS, USE THE FOLLOWING COLOR CODING:
   01) RED
   02) GREEN
   03) BLUE
   04) YELLOW
   05) GREY
   06) PURPLE
   07) BROWN
   08) ORANGE
   09) WHITE
   10) PINK
   11) BLACK
   12) TURQUOISE

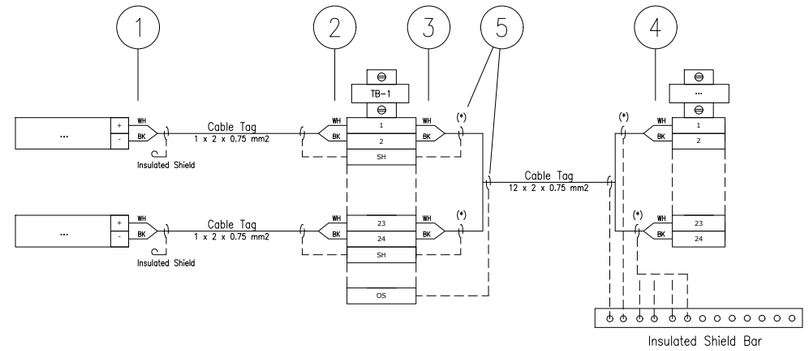
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW —— P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

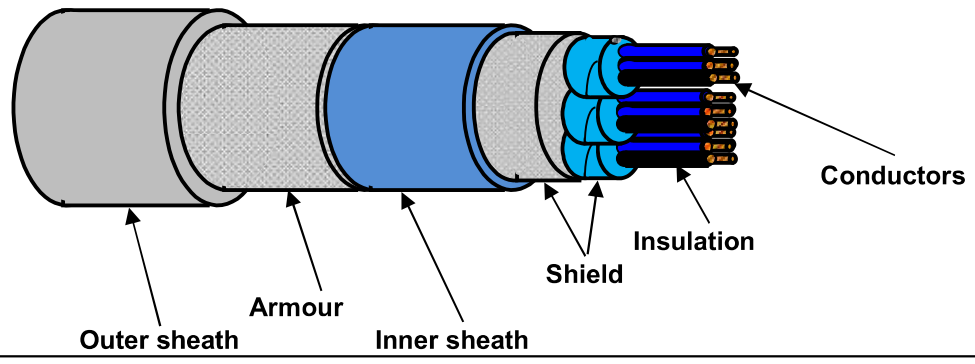
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
UP-200F3/B400-NET-001.01	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	B400-NET-001	Network Cabinet / EMCS System	Lower Deck (B-400)	TELCV03-4X2X23AWG	Cable CAT 6A S/FTP 4x2x23AWG Armoured LSZH - Grey	M20S	T2_M20S_Double			n.a.				I-MCT-301 / B-300-SEC-1B / B-300-SEC-1A / L-SEC-4 / L-SEC-1B / L-SEC-1A / B-400-SEC-3A / B-400-SEC-2I / B-400-SEC-2G / B-400-SEC-2E / B-400-SEC-2C / B-400-SEC-3B / I-MCT-402

FLEI s.r.l.

CAT. 6A S/FTP ARMOURED LSZH

4X2X23AWG - Based on Draka UC500 HS23



TECHNICAL FEATURES

Conductors :	**SOLID** plain annealed copper wires (AWG23) **ø 0,56 mm**
Insulation :	Foamskin PE - **ø 1,38 mm**
Cores colour code :	**blue/white; orange/white; green/white; brown/white**
Pair Assembling :	Cores twisted in pairs
Pair Shield :	Al-laminated plastic foil
Overall Shield:	Tinned copper braid
Inner sheath :	Extruded LSZH Thermoplastic Compound
Inner sheath color code:	**Blue**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant, Average Thickness 1,2 mm
Outer sheath color code:	**Grey**
Outer printing (INKJET) :	**FLEI - 4X2X23AWG - CAT.6A S/FTP ARMOURED LSZH - IEC 60332.1.2 - IEC 60332.3.22 -**
(every 1000 mm)	**Year of Manufacture - CE + Meter Marking**
Under armour diameter :	(7,5 ± 10%) mm
Over armour diameter :	(8,3 ± 10%) mm
Outer diameter :	(10,7 ± 10%) mm
Bending radius :	cable outer diameter x 8 (in fixed installation)
Test Voltage :	1000 V DC for 1' (Between Cores) / 1000 V DC for 1' (Between Cores - Shield)
Loop Resistance :	≤ 154 Ω/Km (@ 20°C)
Insulation Resistance :	≥ 2000 MΩ x km (@ 20°C)
Mutual Capacitance :	Nom. 43 nF/km
Characteristic Impedance :	(100 ± 5) Ω
Applicable Standards	
Design Guidelines :	**Generally to ISO/IEC 11801 / IEC 61156-5 / EN 50173-1 / EN 50288-10 / IEEE 802.3at / af / bt**
ON COMPLETE CABLE	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transm	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14 par.9.3.2a
Temperature Range :	
ON COMPLETE CABLE	
During Operation :	(-20°C up to +60°C) (in fixed installation)
During installation :	(0°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 Sheath together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/05/2024	Messa			
Checked :	29/05/2024	Spaccasassi			
Approved :	29/05/2024	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	UP-200F3/B400-NET-001.02	: COMMUNICATION / EMCS SYSTEM	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	84-10	: AC 35 kVA UPS System (UP-200F3)	Module	LD_B-300/LD_B-400		
TASK	code	C10004371	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Telecom	Form CIX09	Telecom Cable RJ45

CABLE DATA

Type	FTP-LSZH-IS-OS-SWB-LSZH	Cores/Size mm²	4X2X23AWG mm2	Color	GREY
From	UP-200F3	To	B400-NET-001		

1	Confirm cable is as specified in project cable schedule	OK
2	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	Confirm cable labelling is in accordance with specifications.	PL
8	Check cable is correctly loomed and segregated in accordance with specification.	OK
9	Check proper fitting of heat shrink sleeves and cable glands (if applicable).	OK
10	Check cores marking are in accordance with termination diagram.	OK
11	Check terminations are in accordance with latest termination diagram.	OK
12	To roll up that measured lenght complies with pulled lenght.	OK
13	To roll up the cable complies with Cat. 5E performance requirements (250 Mhz).	OK
14	Attach LAN tester print out to this test sheet.	OK
15	if required produce Red Line Mark Up for "AS BUILT"	

Comments: Nota 4: refer to PL C3000680

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-21	2024-11-22	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-21T14:41:33.821Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-22T16:24:38.384Z	

ROSETTI MARINO

Cable ID: UP-200F3/B400-NET-001.02

Test Summary: PASS

Test Limit: ISO11801 PL2 Class Ea
Limits Version: V7.6
Date / Time: 21-11-2024 16:01:40
Headroom 4.7 dB (NEXT 1,2-4,5)
Cable Type: Cat 6A S/FTP
NVP: 77.0%

Main: Versiv
S/N: 2226344
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000 (DSX-PLA804)
S/N: 22340270

Remote: Versiv
S/N: 2226336
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000R (DSX-PLA804)
S/N: 22340257

Length (m), Limit 90.0	[Pair 4,5]	39.7
Prop. Delay (ns), Limit 496	[Pair 1,2]	176
Delay Skew (ns), Limit 43	[Pair 1,2]	4
Resistance (ohms), Limit 20.60	[Pair 3,6]	5.68
Insertion Loss Margin (dB)	[Pair 1,2]	22.4
Frequency (MHz)	[Pair 1,2]	500.0
Limit (dB)	[Pair 1,2]	41.6

	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	3,6-4,5	1,2-4,5	3,6-4,5
NEXT (dB)	4.7	5.9	4.8	5.9
Freq. (MHz)	499.0	499.0	500.0	499.0
Limit (dB)	29.3	29.3	29.2	29.3
Worst Pair	4,5	3,6	4,5	3,6
PS NEXT (dB)	4.8	5.5	4.8	5.5
Freq. (MHz)	500.0	499.0	500.0	499.0
Limit (dB)	26.4	26.4	26.4	26.4

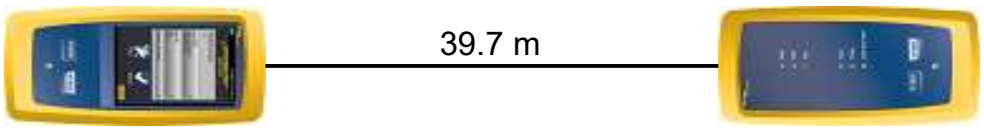
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-7,8	7,8-4,5	4,5-7,8	7,8-4,5
ACR-F (dB)	13.7	13.5	13.8	13.5
Freq. (MHz)	3.6	500.0	500.0	500.0
Limit (dB)	54.0	11.3	11.3	11.3
Worst Pair	4,5	4,5	4,5	4,5
PS ACR-F (dB)	15.4	14.0	15.8	14.0
Freq. (MHz)	474.0	500.0	495.0	500.0
Limit (dB)	8.7	8.3	8.3	8.3

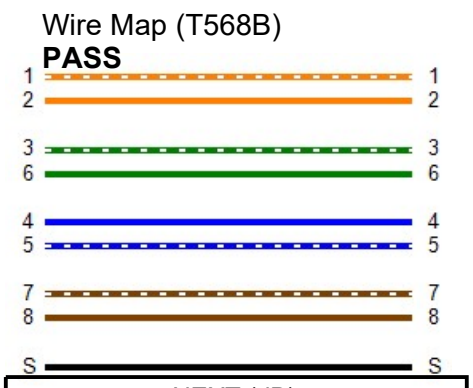
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	1,2-4,5	1,2-4,5	3,6-4,5
ACR-N (dB)	15.4	13.7	27.5	28.6
Freq. (MHz)	29.0	31.8	500.0	499.0
Limit (dB)	41.2	40.1	-12.4	-12.3
Worst Pair	4,5	4,5	4,5	3,6
PS ACR-N (dB)	14.7	13.8	27.6	27.9
Freq. (MHz)	29.0	32.0	500.0	499.0
Limit (dB)	38.8	37.6	-15.3	-15.2

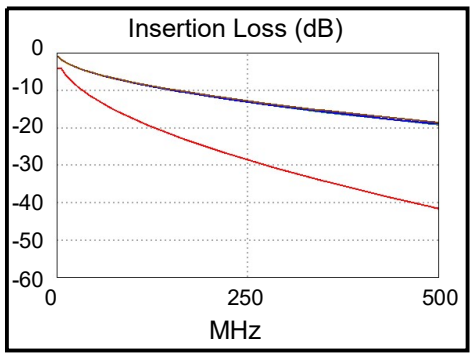
PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8	1,2	4,5	4,5
RL (dB)	2.1	2.1	2.6	10.7
Freq. (MHz)	16.1	15.9	488.0	499.0
Limit (dB)	20.0	20.0	8.0	8.0

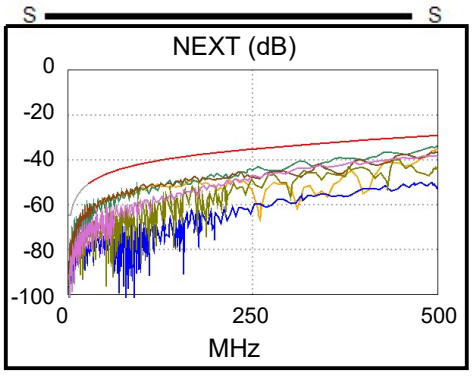
Compliant Network Standards:

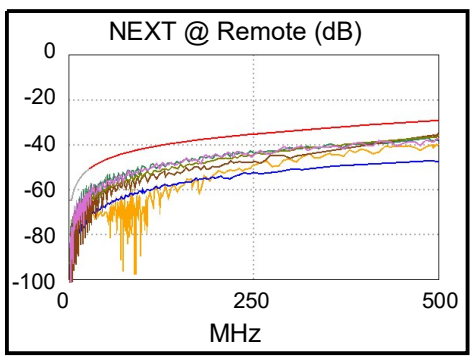
10BASE-T	100BASE-TX	100BASE-T4
1000BASE-T	2.5GBASE-T	5GBASE-T
10GBASE-T	ATM-25	ATM-51
ATM-155	100VG-AnyLan	TR-4
TR-16 Active	TR-16 Passive	

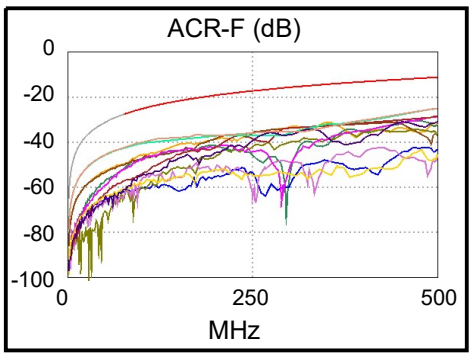


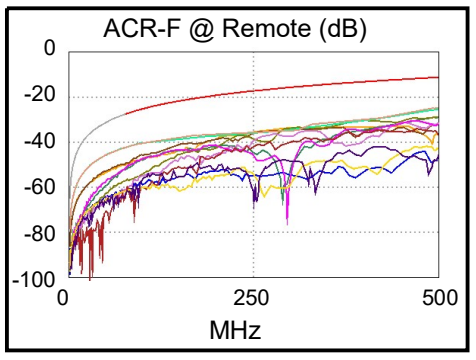


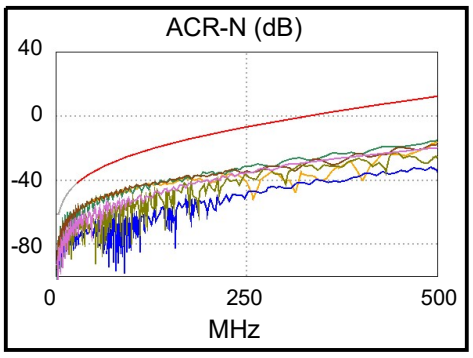


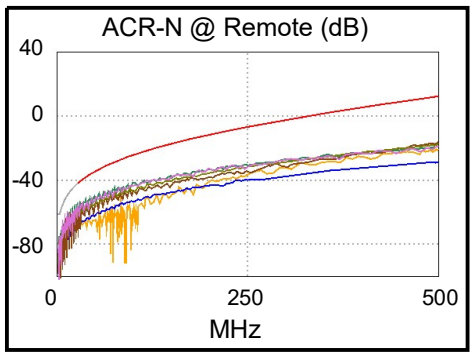


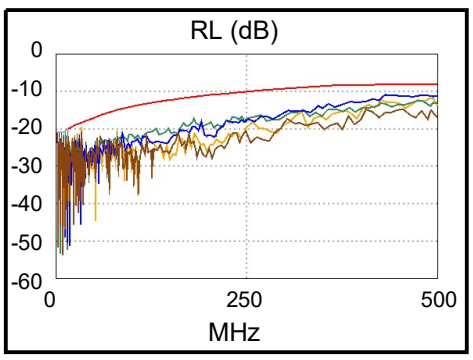


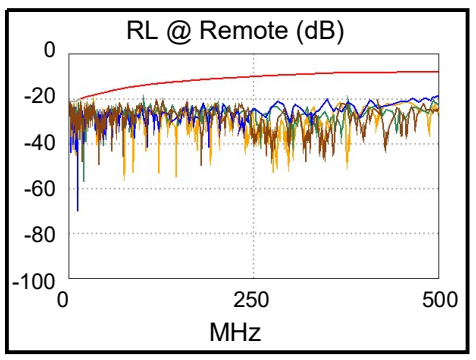










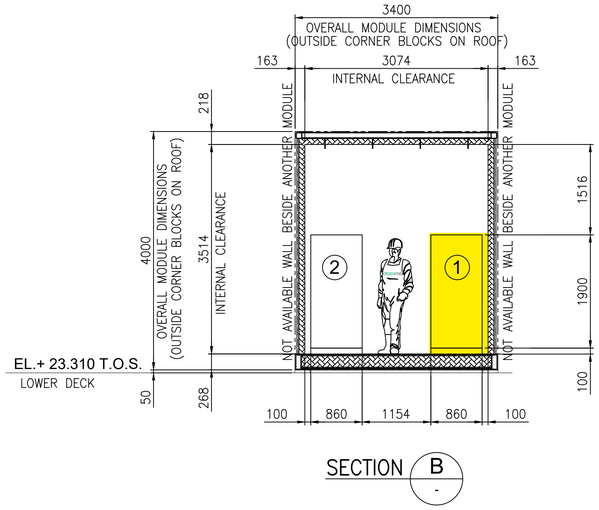


LinkWare™ PC Version 11.4

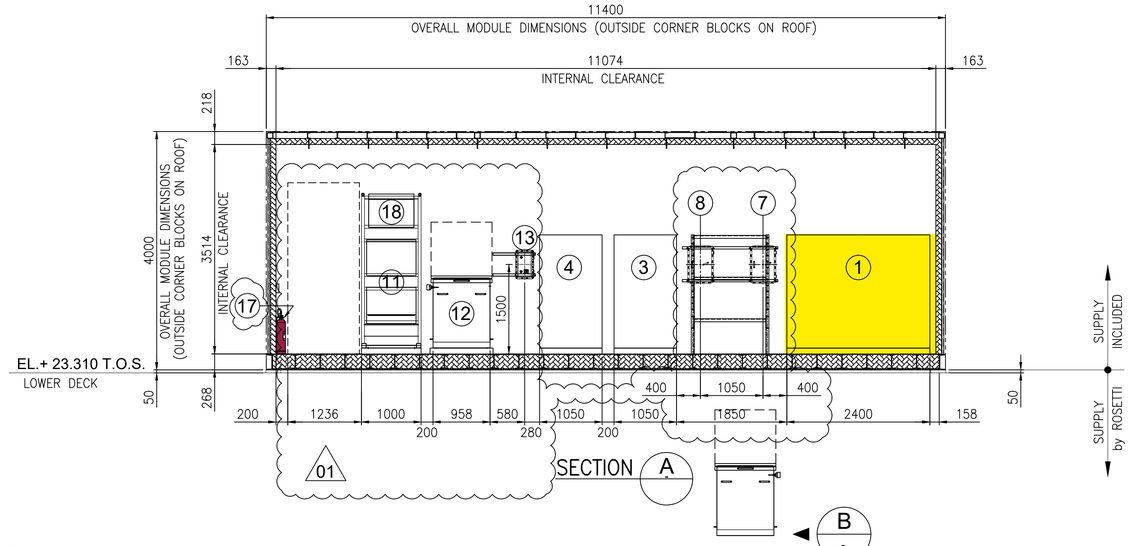
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Floor: Not Set
Rack: Not Set
ROSETTI - CROSSWIND RAME 21.11.2024.flw

Building: Not Set
Room: Not Set
Patch: Not Set

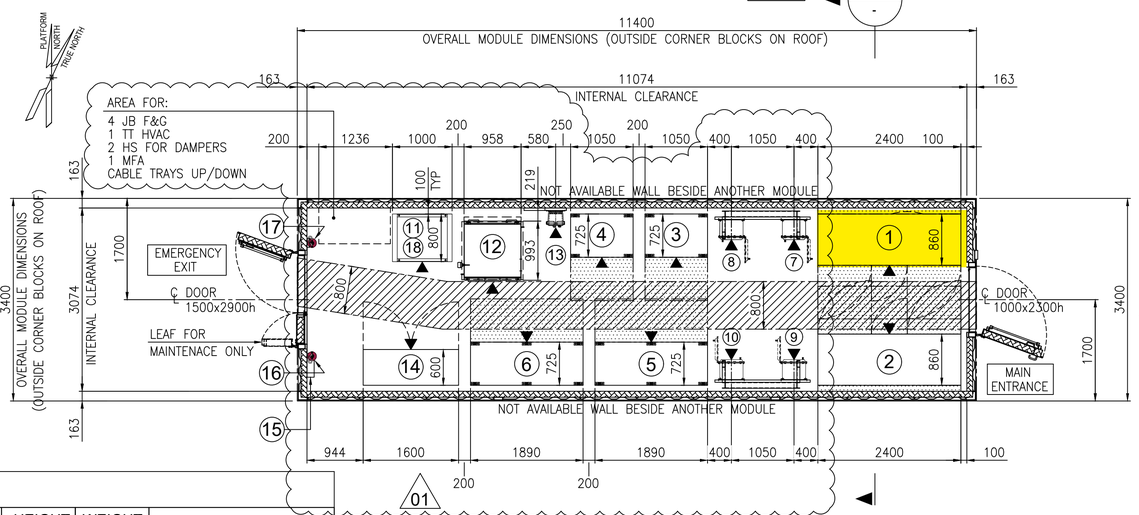
FLUKE networks



SECTION B -



SECTION A -



A -

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

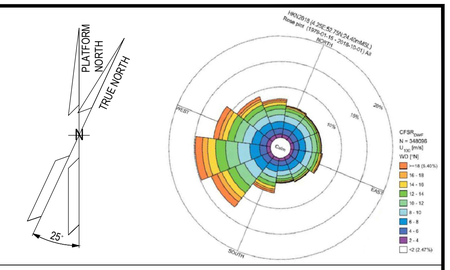
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

01

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

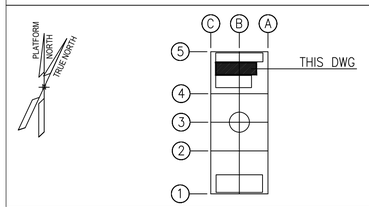
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND
ROSETTI MARINO

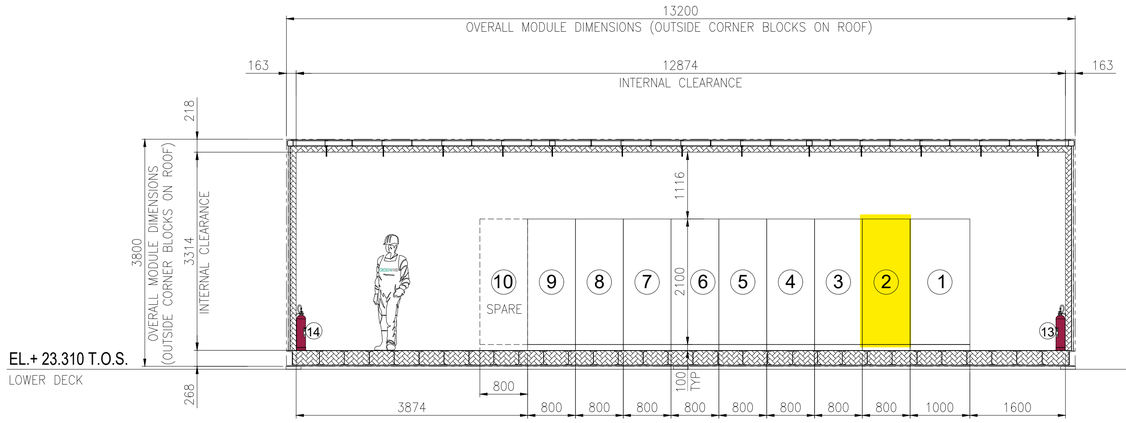
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

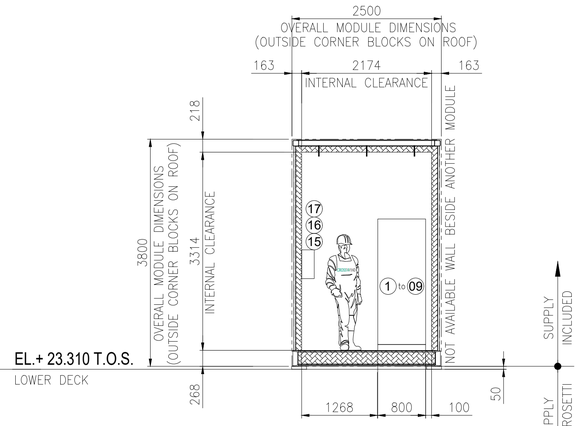
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DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

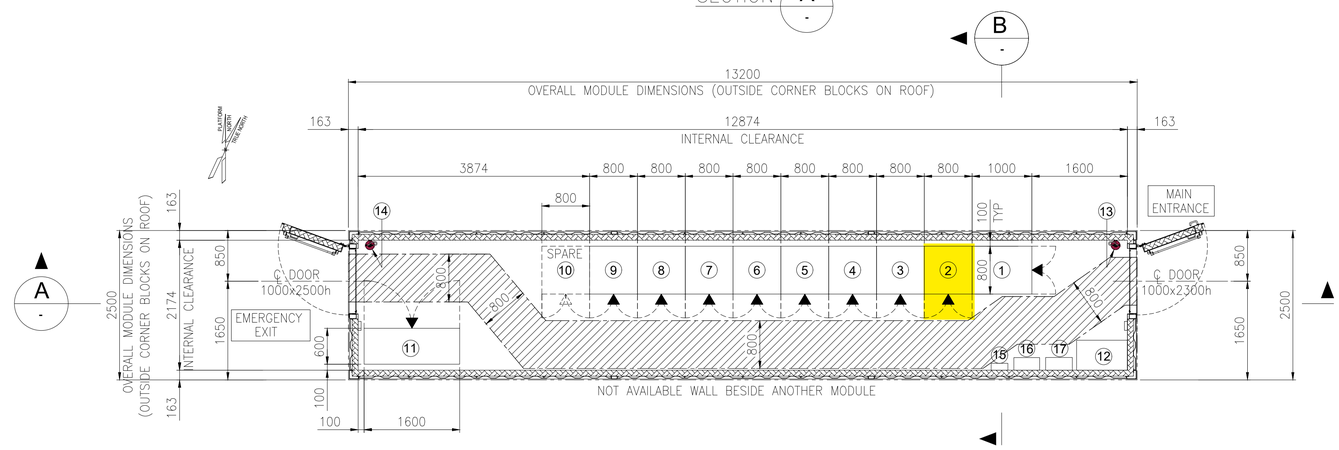
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



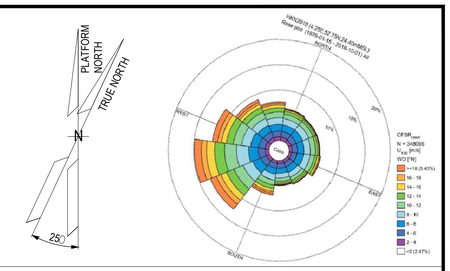
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ EQUIPMENT ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

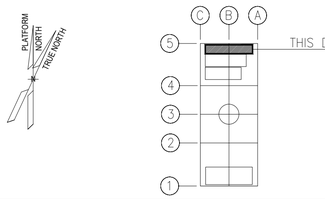
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND — ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH) OFF-SHORE ITER EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:33,3
DRAWN MGA | CHECKED LCA | APPROVED DLO | DATE 27/05/24
A1 | DRAWING NO. 123A90-DDL-IN-DL-40012 | SHEET 001 | REV. 03

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

AC UPS (B-300)

I&T EQUIPMENT ROOM (ITER B400)

NETWORK CABINET - B400-NET-001

HVAC CABINET B300-HSB-001 Ref. Vendor Doc.: 1724000049-HV-DA-00028	ITEM: SCALANCE XC208 PORT: P3 LAN	RJ45	B300-HSB-001/B400-NET-001 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P13
AC UP 35kVA UP -200F3 Ref. Vendor Doc.: 1724000372-EL-DG-00009	ITEM: MULTICANCOM2 UPS1 -A9 / -A29.1 PORT: -X5	RJ45	UP-200F3/B400-NET-001.01 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P05
AC UP 35kVA UP -200F3 Ref. Vendor Doc.: 1724000372-EL-DG-00009	ITEM: MULTICANCOM2 UPS2 -A9 / -A29.1 PORT: -X5	RJ45	UP-200F3/B400-NET-001.02 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: ~~P06~~ P23
AC UP 15kVA UP -200F4 Ref. Vendor Doc.: 1724000372-EL-DG-00009	ITEM: MULTICANCOM2 UPS2 -A9 / -A29.1 PORT: -X5	RJ45	UP-200F4/B400-NET-001.01 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: ~~P07~~ P24
AC UP 15kVA UP -200F4 Ref. Vendor Doc.: 1724000372-EL-DG-00009	ITEM: MULTICANCOM2 UPS2 -A9 / -A29.1 PORT: -X5	RJ45	UP-200F4/B400-NET-001.02 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P08

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
COMMUNICATION – CAT-6

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 035	REV. 01

File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40015

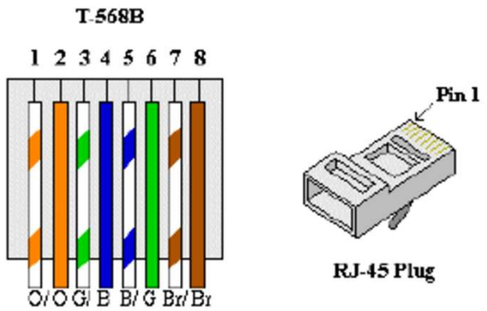
REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. SWITCH TAG NAME AND PORT WILL BE DEFINED DURING THE CONSTRUCTION PHASE
6. FIBER OPTIC TAG NAME WILL BE DEFINED DURING THE CONSTRUCTION PHASE.

<01>

7. CAT. 6A CABLE SHALL BE TERMINATED MEETING REQUIREMENTS OF STANDARD EIA/TIA 568B:



RJ-45 Plug

8. FOR OPTICAL FIBERS, USE THE FOLLOWING COLOR CODING:
   01) RED
   02) GREEN
   03) BLUE
   04) YELLOW
   05) GREY
   06) PURPLE
   07) BROWN
   08) ORANGE
   09) WHITE
   10) PINK
   11) BLACK
   12) TURQUOISE

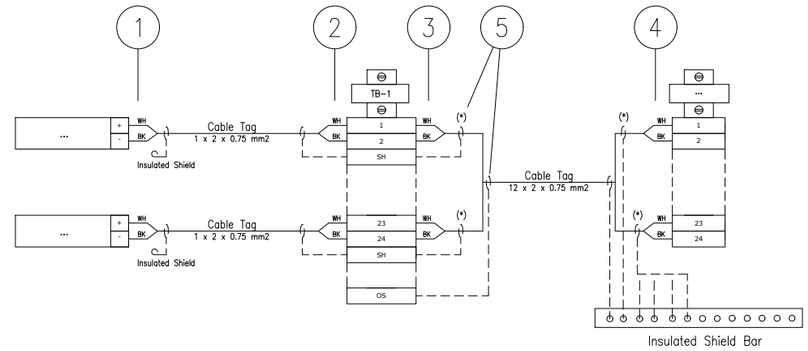
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW —— P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

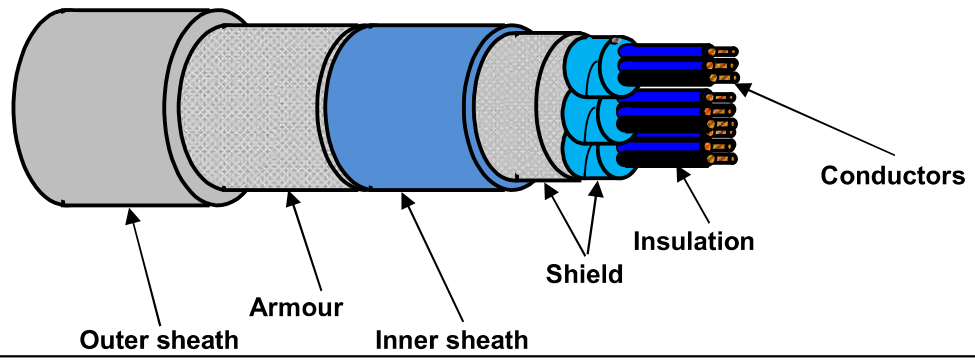
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
UP-200F3/B400-NET-001.02	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						UP-200F3	AC UPS 35 kVA Redundant System with By-Pass	Lower Deck (B-300)	B400-NET-001	Network Cabinet / EMCS System	Lower Deck (B-400)	TELCV03-4X2X23AWG	Cable CAT 6A S/FTP 4x2x23AWG Armoured LSZH - Grey	M20S	T2_M20S_Double			n.a.				I-MCT-301 / B-300-SEC-1B / B-300-SEC-1A / L-SEC-4 / L-SEC-1B / L-SEC-1A / B-400-SEC-3A / B-400-SEC-2I / B-400-SEC-2G / B-400-SEC-2E / B-400-SEC-2C / B-400-SEC-3B / I-MCT-402

FLEI s.r.l.

CAT. 6A S/FTP ARMOURED LSZH

4X2X23AWG - Based on Draka UC500 HS23



TECHNICAL FEATURES

Conductors :	**SOLID** plain annealed copper wires (AWG23) **ø 0,56 mm**
Insulation :	Foamskin PE - **ø 1,38 mm**
Cores colour code :	**blue/white; orange/white; green/white; brown/white**
Pair Assembling :	Cores twisted in pairs
Pair Shield :	Al-laminated plastic foil
Overall Shield:	Tinned copper braid
Inner sheath :	Extruded LSZH Thermoplastic Compound
Inner sheath color code:	**Blue**
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant, Average Thickness 1,2 mm
Outer sheath color code:	**Grey**
Outer printing (INKJET) :	**FLEI - 4X2X23AWG - CAT.6A S/FTP ARMOURED LSZH - IEC 60332.1.2 - IEC 60332.3.22 -**
(every 1000 mm)	**Year of Manufacture - CE + Meter Marking**
Under armour diameter :	(7,5 ± 10%) mm
Over armour diameter :	(8,3 ± 10%) mm
Outer diameter :	(10,7 ± 10%) mm
Bending radius :	cable outer diameter x 8 (in fixed installation)
Test Voltage :	1000 V DC for 1' (Between Cores) / 1000 V DC for 1' (Between Cores - Shield)
Loop Resistance :	≤ 154 Ω/Km (@ 20°C)
Insulation Resistance :	≥ 2000 MΩ x km (@ 20°C)
Mutual Capacitance :	Nom. 43 nF/km
Characteristic Impedance :	(100 ± 5) Ω
Applicable Standards	
Design Guidelines :	**Generally to ISO/IEC 11801 / IEC 61156-5 / EN 50173-1 / EN 50288-10 / IEEE 802.3at / af / bt**
ON COMPLETE CABLE	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transm	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14 par.9.3.2a
Temperature Range :	
ON COMPLETE CABLE	
During Operation :	(-20°C up to +60°C) (in fixed installation)
During installation :	(0°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 Sheath together with correct ATEX approved equipment or accessories.**

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/05/2024	Messa			
Checked :	29/05/2024	Spaccasassi			
Approved :	29/05/2024	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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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

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-AEG-01	SHEET 1 di 6
		Data *Date 27/09/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor*
FORNITORE *Supplier: AEG*	**No. Ordine** *P.O. No.*	**OGGETTO** *Object UPS SYSTEM*	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	**QUANTITA'** *Quantity*	**DESCRIZIONE** *Description*	**Nr. TAG** *TAG No.*	**TIPO DI ISPEZIONE** / *Kind of Inspection*	**ESITO** / *Result*
-	1	AC UPS SYSTEM (40 KVA)	UPS1 UP-200F3, UPS2 UP-200F3 BYPASS BY-200F3	Visual & Functional test	**Satisfactory (SEE NOTES)**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
AC UPS - FACTORY ACCEPTANCE TEST PROCEDURE	1724000372-QC-PRO-00017	01	Updated several sections
AC UPS - GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004	03	Updated several sections
AC UPS - SINGLE LINE DIAGRAM AND INTERCONNECTING DIAGRAM	1724000372-EL-DG-00007	01	Updated several sections
AC UPS - WIRING DIAGRAM & TERMINAL SCHEDULE INCLUDING EQUIPMENTS LIST & BILL OF MATERIAL	1724000372-EL-DG-00009	01	Updated several sections

DISTRIBUZIONE A: / *Distribution to:*

☐ **GESTIONE FORNITURE** / *Supply Management Department*	☐ **CAPO COMMESSA** / *Project Manager*
☐ **PRODUZIONE** / *Production*	☐ **FORNITORE** / *Supplier*
☐ **PPLM** / *Project Procurement & Logistic Manager*	☐ **P.Q.M.**
☐ **MAGAZZINO** / *Warehouse*	☐ **P.E.M.**

ATTIVITA' ESEGUITE / *Activities Carried Out*

A - INTRODUZIONE / *Preliminary Introduction*

The present report refers to the inspection visit carried out on 26-27/09/2024 at AEG, **59581 Warstein, Germany.**
The following inspection activities were witnessed by Rosetti Marino and they have performed:

Attendees the test:

Lambertini Andrea QC Insp (Rosetti Marino)

Area of concern

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *Supply Management dept.*		AEG PS :.V.C. 30.09.2024 12:16

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-AEG-01	SHEET 2 di 6
		Data *Date 27/09/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor*
FORNITORE *Supplier: AEG*	**No. Ordine** *P.O. No.*	**OGGETTO** *Object UPS SYSTEM*	

None

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	**ESITO** / *Result*
FACTORY CCEPTANCE TEST	**Satisfactory SEE NOTE 2**
UPS001 BC-200F3A VISUAL INSPECTION INTERNAL & EXTERNAL	**Satisfactory**
UPS002 BC-200F3B VISUAL INSPECTION INTERNAL & EXTERNAL	**Satisfactory**
AC-BY-PASS BY-200F3 VISUAL INSPECTION INTERNAL & EXTERNAL	**Satisfactory SEE NOTE 1**

C –DETTAGLIO DEGLI STRUMENTI UTILIZZATI PER TEST E ISPEZIONE / *Details of Inspection and Test Instruments used*

NOME DELLO STRUMENTO
Equipment name

See attachments	**PRODUTTORE** *Manufacturer*	**MODELLO** *Model*	**PROSSIMA TARATURA** *Next calibration*
		N/A	N/A
D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** */ Certificates and Test Reports)*			

NUMERO DOCUMENTO /
Document Number

Calibration Certificates	**DESCRIZIONE** / *Description*	**TIPO** / *Type*	**NR. PAGINE** / *No. Pages*
N/A	----------	Procedure	
	----------	N/A	

E – DETTAGLI ED ESITO DELL'ISPEZIONE */ Details and Results of Inspection*			

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *Supply Management dept.*		AEG PS i.V. C.P. 30.09.2024 12:17

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ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-AEG-01	SHEET 3 di 6
		Data *Date* 27/09/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor*
FORNITORE *Supplier: AEG*	**No. Ordine** *P.O. No.*	**OGGETTO** *Object UPS SYSTEM*	

POS. *Item*

-	**BREVE DESCRIZIONE MATERIALE** *Material brief description*	**Q.TA' ODA** *Order Q.ty*	**Q.TA' TESTATA** *Tested Q.ty*	**ACCETTATO** *Accepted*	**DATA ACCETTAZIONE** *Acceptance date*
	AC UPS SYSTEM	1	1	Satisfactory	**27/09/2024**

F – CONCLUSIONI / *Conclusions*

FAT were witnessed by RM inspector as per applicable Job specification and relevant procedures and results are SATISFACTORY, as mentioned in the body of this report.

G – PUNTI IRRISOLTI / *Outstanding points*

NOTE 1: REVIEW GENERAL ARRANGMENT DWG (1724000372-EL-DA-00004) AS PICTURES ATTACHED.
NOTE 2: PRODUCE PROCEDURE WITH DETAILED TEST STEPS FOR START UP, SHUT DOWN AND MANTENANCE OPERATIONS SPECIFIC FOR BLPH PROJECT.

H – STATO PACKING LIST /
Packing List Status

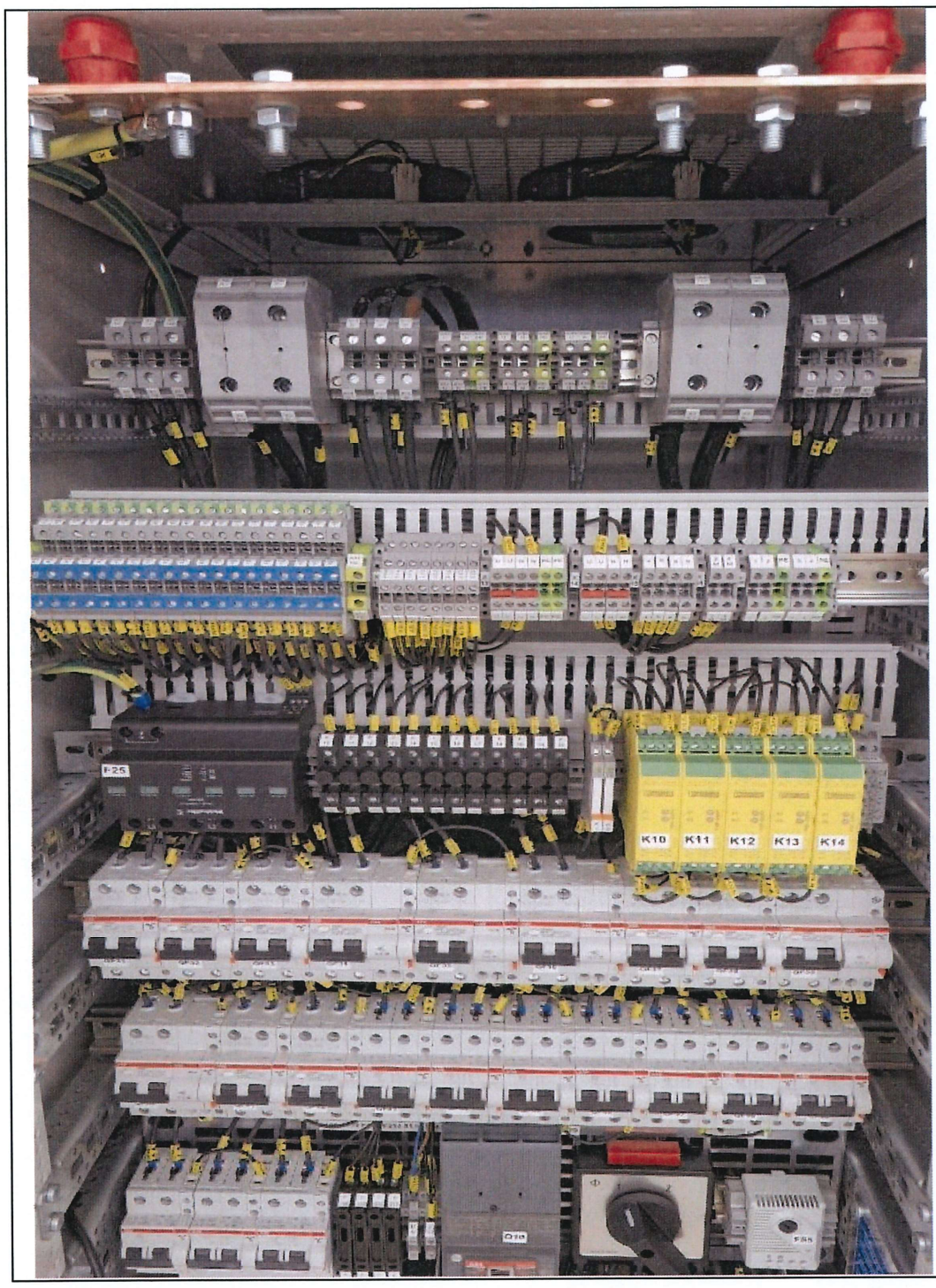
PUNCH LIST REPORT: VEDI ALLEGATO N° / *Refer to Attachment n° NOT APPLICABLE*

REPORT FOTOGRAFICO (SE PRESENTE) / *Digital Pictures (if any)*

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *Supply Management dept.* Lanfranchi Alice		AEG PS : V.C.P. 30.09.2024 12:17

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
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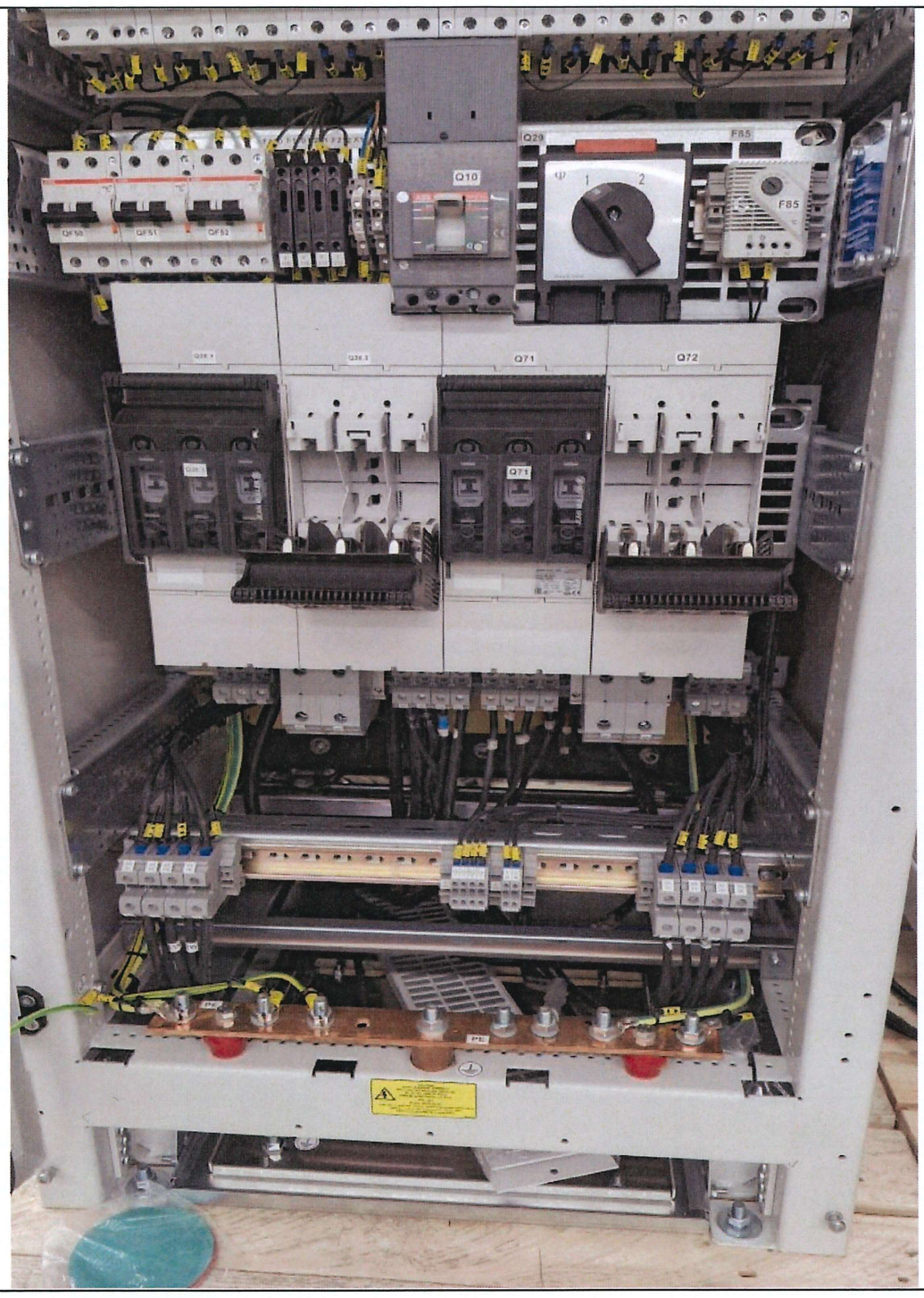
ROSETTI MARINO	INSPECTION REPORT	Report No. IR-AEG-01	SHEET 4 di 6
		Data *Date* 27/09/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor*
FORNITORE *Supplier: AEG*	**No. Ordine** *P.O. No.*	**OGGETTO** *Object UPS SYSTEM*	



L' INCARICATO / *The person in charge*	IL RAPP. DEL CLIENTE / *Client's Representative*	IL FORNITORE / *Supplier*
ROSETTI MARINO *Supply Management dept.*		AEGPS :V.C.P.E 30.09.2024 12:17

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ROSETTI MARINO	INSPECTION REPORT	Report No. IR-AEG-01	SHEET 5 di 6
		Data *Date 27/09/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor*
FORNITORE *Supplier: AEG*	**No. Ordine** *P.O. No.*	**OGGETTO** *Object UPS SYSTEM*	



L' INCARICATO / *The person in charge*	IL RAPP. DEL CLIENTE / *Client's Representative*	IL FORNITORE / *Supplier*
ROSETTI MARINO *Supply Management dept.*		AEG PS V.C.I.E 30.09.2024 12:18

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ROSETTI MARINO	INSPECTION REPORT	Report No. IR-AEG-01	SHEET 6 di 6
		Data *Date 27/09/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor*
FORNITORE *Supplier: AEG*	**No. Ordine** *P.O. No.*	**OGGETTO** *Object UPS SYSTEM*	

NON VALIDO PER IL RILASCIO DELLA FORNITURA / *It is not valid for the supply's release*

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO *Supply Management dept.* Lorenzini Silvia		AEG PS ; V.CPE 30.09.2024 12:18

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE